# ORGANIC COTTON: GROWING TOGETHER

symbiosis

## Promoting change, ensuring preservation

Ongoing change is part of any healthy natural system. Organisms emerge, grow, die, and are re-incorporated elsewhere in the ecosystem. Economic markets are often compared to ecosystems. But in markets, changes are not always sustainable. Consumer tastes can be fickle, sometimes driven more by fashion and novelty than by practicality. Even staple products, such as coffee, sugar and cotton, are subject to tremendous volatility in demand and price, potentially putting farmers and producers out of business.

Today, strong movements are underway with organic and fair trade markets. These movements seek to build systems that are sustainable economically as well as ecologically—systems that support stewardship at the farm gate and contribute to a cleaner, healthier environment for us all. We can all contribute to the growth and sustainability of organic products and markets. Farmers can constantly improve quality and introduce innovation. Retailers and manufacturers can commit to using organic and to expanding the quality and variety of their products. Consumers can ask for and buy organic alternatives.

Whether you're a farmer, a manufacturer, or a consumer, we hope this booklet will answer many questions, and inspire many more. Delve deeper into the issues and the answers at **www.aboutorganiccotton.org**.

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symbiosis
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[n] the relation between two different species of organisms that are interdependent; each gains benefits from the other

## symbiosis: we are all connected

The collaboration between bees and flowering plants is a wonderful example of a **symbiosis**. The plants produce nectar, the bees' food source. While harvesting nectar, the bees pick up and spread pollen among all the flowers they visit, enabling the plants to reproduce. In contrast to a parasitic relationship, where one organism thrives at the expense of another, both parties benefit in a symbiotic relationship.

Symbioses can also be sustained over the long term, unlike parasitic relationships. In fact, in many cases, they must be sustained: one or both species may literally not be able to survive without the other.

Growing, processing, and marketing organic cotton creates chains of symbioses. Some are ecological, some are economic, and many are both. In the following pages, we'll introduce you to some of these relationships.

# Cotton is woven THROUGH your LIFE

...in the thick, thirsty towel that dries you after your morning shower...

in the favorite T-shirt and worn-to-perfection jeans you pull on, eager to start your day...

in the personal care products you use, such as swabs, pads, and tampons...

in the absorbent diaper that keeps your baby comfortable...


cottonseed oil is in the snacks you munch on ...

and in the feed given to livestock that nourishes you...

cotton makes the sheets you slip between at the end of a full day...

and the pillowcase that cradles your head for sweet dreams...

# ORGANIC COTTON is different

The most extreme forms of conventional cotton farming can be compared to hydroponic growing, using "dead dirt" as the growth medium. Because of depletion and/or pesticides, the soil is often nearly sterile. This means that everything the cotton needs to grow must be delivered to it, including synthetic fertilizers and vast quantities of water.

## Seed Preparation

www.aboutorganiccotton.org

**CONVENTIONAL**

• Typically treats seeds with **FUNGICIDES** or **INSECTICIDES** • Uses **GMO** seeds for approximately 70% of US-grown cotton

**ORGANIC**

• Uses **UNTREATED** seeds • **NEVER USES GMO** (genetically modified organism) seeds

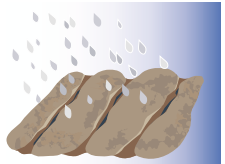
## Soil & Water

**CONVENTIONAL**

• Applies **SYNTHETIC** fertilizers • Loss of soil due to predominantly **MONO-CROP** culture • Requires **INTENSIVE IRRIGATION**

**ORGANIC**

• Builds strong soil through **CROP ROTATION** • Retains water more efficiently thanks to increased **ORGANIC MATTER** in the soil



## Weed Control

**CONVENTIONAL**

• Applies **HERBICIDES** to soil to inhibit weed germination • Repeatedly uses **HERBICIDES** to kill weeds that do grow

**ORGANIC**

• **PHYSICAL** removal rather than chemical destruction • Controls weeds through cultivation and **HAND HOEING**

## Pest Control

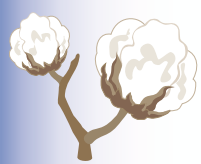
**CONVENTIONAL**

• Uses **INSECTICIDES** heavily, accounting for approximately 25% of world consumption • Uses **PESTICIDES**: the nine most common are highly toxic; five are probable carcinogens • Frequently uses **AERIAL SPRAYING**, with potential drift onto farm workers, neighboring wildlife and communities

**ORGANIC**

• Maintains a **BALANCE** between "pests" and their natural predators through healthy soil • Uses **BENEFICIAL INSECTS**, biological and cultural practices to control pests • May use **TRAP CROPS**, planted to lure insects away from the cotton

## Harvesting



**CONVENTIONAL**

• Defoliates with toxic **CHEMICALS**

**ORGANIC**

• Relies mostly on the seasonal **FREEZE** for defoliation • May stimulate defoliation through **WATER** management

In contrast, organic cotton farming seeks to restore and build up the soil, increasing its organic matter content, which in turn increases its water-retaining ability. The rich, moist earth results in stronger plants, which improve the soil still more. The downstream benefits are very literal. Far less water runs off organic fields, and what does is not polluted with pesticides or synthetic fertilizers.

Is this a safe place to play?

## What you should know about cotton

Whether they're located in the next county or on the next continent, farms affect the world you live in. The way farms are operated has profound effects on the farmers, on nearby communities, on water and soil, and on wild and domestic animals and plants – including the food crops that are often grown in rotation with cotton.

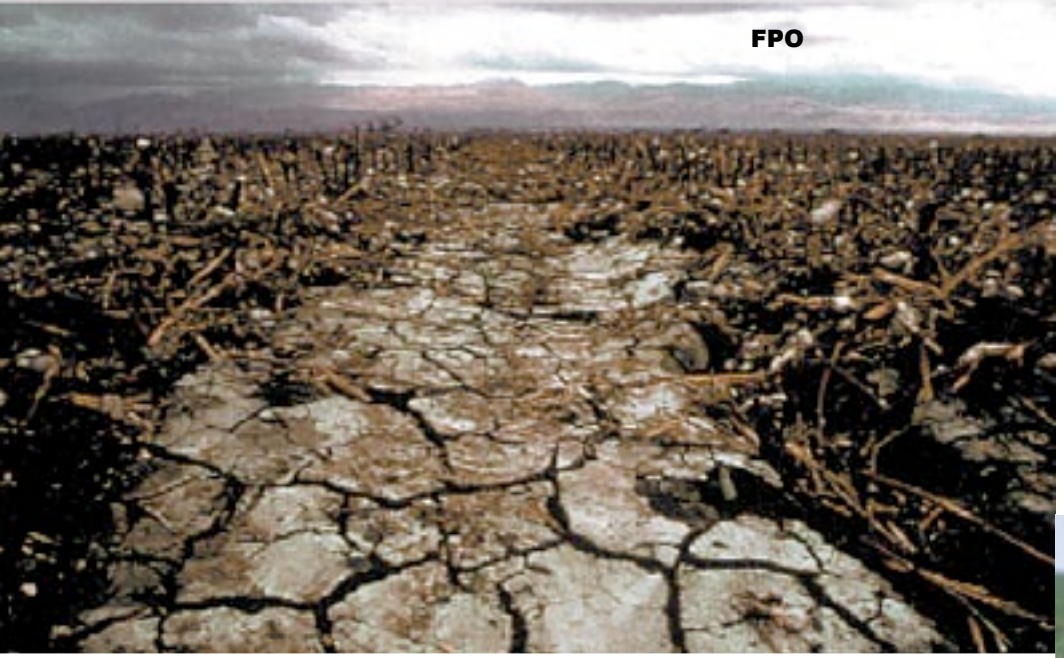
Roughly 5% of the agricultural land in the world is used for farming cotton. As the box on the opposite page shows, conventional cotton growing consumes a disproportionate share of pesticides, so its ecological impact is even larger than this figure would suggest.



**Did YOU know?**

**Conventionally grown cotton consumes approximately 25% of the insecticides and more than 10% of the pesticides used in the world. Conventional farming devours roughly a third of a pound of pesticides and fertilizers to just produce enough cotton for a single T-shirt.**

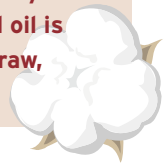
Pesticides are used by farmers to deal with unwanted "pests." They include: insecticides, which target crop-eating insects; fungicides, which target funguses that occur on crop seeds or leaves; herbicides, which target "weeds" that compete with the crop; and defoliants, which target the cotton crop itself, shrivelling up the leaves around the bolls to prevent staining and make harvesting easier. There are serious "downcides" to many of these chemicals, including cancer, birth defects, endocrine disruption, and nervous system disorders.
Visit www.beyondpesticides.org for more information.




Throughout most of human history, all farming, cotton and otherwise, was basically organic by default: there were no synthetic pesticides or insecticides. That changed with the World Wars and the first large-scale deployment of chemicals specifically formulated to eradicate life. The descendants of these deadly chemicals were later applied to farming.



**Did YOU know?** **Pesticides used in conventional cotton farming can enter the human food chain. Because cotton is grown primarily for its fiber, it is regulated as a non-food crop. In fact the majority of the cotton plant, by weight, ends up in our food supply. Cottonseed oil is used in processed foods. Beef and dairy cows are fed cotton straw, cottonseed meal and waste from cotton gins.**



In the case of cotton, this is part of a war on weeds and pests that attack cotton. And, just as in any other war, many innocent bystanders, including plants, animals, and humans, are wounded and killed – a tragedy that continues to this day.

## The Regrowth of Organic Cotton

The organic fiber movement developed out of the organic food industry. Farmers began to grow organic cotton in rotation with their organic food crops. The 1980s and early 1990s were a period of public concern for food safety, and a growth period for the organic food industry. Organic fibers also rode this wave, and raw-feel fabrics and earth tone colors were very "in" for a time.

However, in the mid-nineties, synthetic fabric makers brought in polyester microfibers, peach-skin finishes and neon bright colors. Consumer demand shifted and many small organic fiber companies went out of business. By 1996, US organic fiber production was a fraction of what it had been.

Farmers, and those who work with them, are no strangers to rallying after lean years. Many farmers are rebuilding their organic acreage. Many veterans of the early organic fiber companies have brought their experience, expertise, and undiminished enthusiasm to influential companies worldwide. Their vision for organic cotton's rebirth is not "boom and bust," but slow, steady growth. By both educating consumers and responding to their needs, organic cotton's boosters seek to make this renaissance sustainable economically as well as ecologically.

**Symbiosis**

We have symbiotic relationships with dozens of domesticated plants and animals. They may provide food, fiber, labor, protection, and/or companionship. In return, we work to ensure their survival. Domesticated cotton is one example of this.

## The Cottoneers: Pioneers in Change

Doing things the way everyone around you is doing them is a natural human tendency. It takes vision and courage to step back and decide there are better ways—better ecologically, better ethically, and ultimately, better economically. We've nicknamed such visionaries in the organic cotton field "Cottoneers," because we think they embody real pioneer spirit. Cottoneers range from organic farmers, who break new ground in the literal sense, to mill operators, wholesalers, and retailers who do so metaphorically by creating new products, and new business models, including symbiotic co-operation among traditional competitors.

On the following pages, we introduce you to a few of the many people and companies who have helped make the organic cotton industry what it is today. To meet more cottoneers, visit www.AboutOrganicCotton.org.

## The Texas Organic Cotton Marketing Cooperative: Rooted in Soil and in Society

The TOCMC is a co-operative of farms owned by families—many of whom are 3rd and 4th generation stewards of the land. In 1993, they made the commitment to each other and the organic cotton industry to create a stable and consistent supply of certified cotton fiber. In 2004, the co-operative represented 30 farmers. They produced between 4,000 and 5,000 bales of organic cotton that year, representing 80% of US production. Most of the farmers live on the High Plains of Texas, where winters are cold enough to reduce insect problems, and a hard freeze defoliates the cotton for harvesting without the use of chemicals.

In addition to raw fiber, TOCMC members sell the seed from cotton lint to dairies for organic feed. They also grow numerous other crops organically. As well as common crops, the farming families of the TOCMC share common values: they believe firmly in the importance of loyalty, sustainability, truth, integrity, and education. They plant more than crops: in 1996, members of the TOCMC created Organic Essentials, described on the next page.



## Organic Essentials: Caring for People – and the Planet

Like the TOCMC, its parent organization, the strength of Organic Essentials lies in personal connections. In this case, the ties couldn't be tighter: the founders (all TOCMC members) were Jack Minter, his daughter LaRhea Pepper, and her husband Terry Pepper.

Organic Essentials offers personal care products made of organically grown cotton, and without binders, fillers or other additives. Rather than chlorine bleach, these products are whitened with hydrogen peroxide, which is healthier for both the user and the environment.

Co-founder Jack is very much a man with a mission: "To encourage the proper use of our land...we should be good stewards." He sees Organic Essentials as playing a vital role in that mission, by bringing a special variety of products to the marketplace. LaRhea, President of Organic Essentials, echoes and enlarges that goal: "We want to expand organic agriculture, we want to have the best personal care products for women and their families, and we want to have a positive impact on our rural community."

## Maggie's Functional Organics: When the Chips are Down

Benâ Burda had been creating, manufacturing, and marketing organic foods for years. Her involvement in cotton, and ultimately in co-operatives, was serendipitous. Her blue corn chips were a success, but the corn would sometimes fade, resulting in grey chips that didn't appeal to consumers. It turned out that planting organic cotton with the corn prevented the fading. Benâ got into the clothing business to help market that organic cotton.

Long aware of the chemicals used in conventional food farming, Benâ found the situation was just as bad in conventional cotton farming. She was also horrified by the condition in overseas sweatshops where so many garments for North America are made. At this point, many people would have been discouraged by the seemingly endless obstacles to making garments morally. Instead, Maggie's Functional Organics helped create "Maquiladora Mujeres," a worker-owned and directed sewing co-operative, in Nicaragua. Besides many other benefits, this co-op pays part-time wages 40% higher than those at nearby sweatshops. This all reflects Benâ's philosophy that "There is no environmental sustainability without social responsibility."



## Patagonia: Organic Climbing, Organic Cotton

As a young climber, Yvon Chouinard made his own steel pitons (the wedges driven into rock to secure climbing ropes). By 1970, Chouinard Equipment was the largest supplier of climbing hardware in the US. However, Yvon was aghast to find his favourite climbing spots defaced by the use of his pitons. He and his partner took an enormous risk by phasing out their mainstay product and introducing chocks that could be wedged by hand rather than hammered in and out.

This lower-impact technique was described as "organic climbing." In the 1990s, Yvon took a similar principled stand with Patagonia: he converted their entire sportswear line to 100% organic cotton. Patagonia had to both reduce profits and raise prices to do this. But they committed themselves to never to going back to conventional cotton, regardless of the outcome. Fortunately, the gamble was a success. It's an indication of their sincere commitment to change that Patagonia helps other companies go organic, including competitors such as Mountain Equipment Co-op.

## Mountain Equipment Co-op: Canadian Cottoneer

Mountain Equipment Co-op is Canada's largest retailer of equipment for self-propelled recreation, and a founding member of the Organic Exchange. Today, MEC-label cotton clothing is 100% organic. The task took three years, lots of research, much travel, many anxious moments, and much help from Patagonia and others.

The driving force behind MEC's changeover was Anne Gillespie, then MEC's buyer for cotton clothing. Her determination resulted from an epiphany she experienced while on a tour of a conventional cotton farm in California. "The run-off water from these farms is confined in huge lagoons to allow the toxic insecticides and pesticides to settle out," says Anne. "Surrounding these settling ponds is a vast no-man's land, devoid of animal or plant life, and so toxic that visitors are warned to wash their hands thoroughly after leaving. The barren battlefield atmosphere is completed by the regular boom of propane cannon fired to deter birds from landing in the lakes of poison. I realized then and there that I could not in good conscience continue to support these farming methods, which essentially wage war on the natural environment."

## Nike: In for the Long Run

Nike is a founding member of the Organic Cotton Exchange. Currently, about one-third of Nike's cotton-containing products feature organic cotton. Some are blends; others are 100% organic. Nike is gradually integrating organic cotton into their products. This helps ensure that other manufacturers continue to have access to organic cotton: in 2003, organic cotton accounted for about 2.5% of Nike's total cotton use; even this proportion made Nike the largest retail user of organic cotton fiber in the world.

A long-time "organic fiber evangelist," Heidi McCloskey is currently Nike's Global Sustainability Director. Heidi is keenly aware that the choices made by individuals and by organizations have immense and far-reaching impacts. This was most memorably brought home to her during a visit to an organic farm in Texas. She watched the farmer hug his children upon returning from a day in the fields—something he would have been loathe to do had he been covered in conventional farming chemicals.

As Heidi looked on, she realized that he could safely embrace his family because she and others supported healthy farms through their purchase of organic cotton.

## Indigenous Designs: One Weave...We're All Knit Together

Ever since they were adolescents, Matt Ridley and Scott Leonard have shared the conviction that running a successful business doesn't have to involve abusing workers or the environment. Their vision was of a win-win-win enterprise, one in which treating people and the planet with dignity actually improved profits. These profits would in turn help expand the business, thereby benefiting ever more workers and more acres of earth, in a three-way symbiosis.

In pursuit of this goal, Scott made a pilgrimage through dozens of small towns in South America's Andes Mountains, seeking out knitting co-operatives. He and Matt helped nurture these coops into enterprises that, in the words of an independent third party, are "an intact and beneficial model of community trade...For example, use of natural dyes, no dyes, and organic fibers, equal distribution of responsibilities among men and women, training opportunities for artisans to improve their skills and understanding of quality control measures, and support from local non-profit organizations that enhance the community development activities of the cooperatives."

Now one of the top eco-sensitive clothing companies in the fashion industry, Indigenous Designs continues to transplant this empowering co-operative business model to other communities around the world.



## Dairy Farming

Mark Retzloff and Barney Little are two people with enormous energy from different backgrounds who share a passion for organic agriculture. Mark, a dedicated environmentalist and entrepreneur, creates new organic companies to stimulate consumer demand for organic products. Barney, a genuine California cowboy and rodeo champion, takes the organic message to the agricultural community to help develop the supply of high-quality organic agricultural commodities. In the early 1990s they combined their talents to help develop the market for organic cottonseed, a valuable byproduct of organic cotton production.

Mark, who is also the co-founder of an organic dairy company, joined forces with Barney to develop a superior feed for organic milk cows, incorporating organic cottonseed as a key component. Barney, as head of farm resource development for the organic dairy, worked extensively with the Texas Organic Cotton Coop to set up a mutually beneficial partnership for an ongoing supply of organic cottonseed. This partnership helped improve the nutrition of the organic dairy feed program, and it helped the coop by giving the coop farmers additional value-added sales for their cotton crop. The contented cows produced high-quality organic milk, and the organic cotton coop benefited financially with additional sales —truly a win-win partnership.

## Sustainable Cotton Project: Building Bridges from Barn to Boardroom

Since the early nineties, SCP's Cleaner Cotton Campaign (CCC) has been building bridges between farmers, manufacturers, and consumers. The CCC works with local farmers, helping to develop markets for certified organically grown and sustainable cotton. The SCP visits key clothing companies and gives a strong presentation which makes both the business and ethical/environmental cases for going organic. These presentations are further re-inforced by the powerful website that the SCP has developed; **www.sustainablecotton.org**.

But the SCP's most powerful educational tools are its farm tours of California's cotton-growing areas. Here, company executives and staff see firsthand the environmental effects of conventional cultivation. If seeing the SCP's presentation is watching news coverage of a war, taking such a tour is visiting the frontlines. Participants are often profoundly and permanently affected. As one clothing company VP observed, "Once you have knowledge, you can't go back." Such comments demonstrate that the CCC's efforts have transformed organic cotton from obscurity to being very much on the minds of apparel industry decision makers.



## Spiritex: No Baling Out

Being pioneers, among the first to go where few have gone before, offers both opportunities and perils. Daniel Sanders and his wife Marylou had run a successful design house in NYC, but by 1990, "We yearned to be in a field where we felt, not only were we earning a living, but we could contribute something meaningful to society."

They settled on producing a basic, unbleached and undyed T-shirt. It was so successful that other, larger manufacturers began offering similar products. So Daniel and Marylou decided to even more natural, by making theirs of organic cotton. On their first purchase of organic cotton, Daniel got confused over the meaning of the word "bale," and discovered that he had accidentally purchased a dozen times more raw cotton than he had intended!

With the help of an enthusiastic and astute partner, Edward Mandeau, they found ways to process the cotton and produce organic T-shirts. Despite such misadventures, Daniel retains an undiminished passion for organic fibers of all kinds, and is active in their promotion.

# from Field to Finished Product

## How did the cotton in your t-shirt get there?

It's one thing to say the fiber in your garment/towel, etc. is grown organically, but what about what happens to that cotton after it is harvested, while it is becoming a T-shirt? Did you know that making a T-shirt takes 6-8 weeks and 5 different steps? The process involves high-tech machinery, and the addition of chemicals, to produce the fine, soft fabric that ends up next to your skin. Here's the simplified story of what happens as the cotton makes its way from the farmer's field to the shirt on your back:

**Farm** – Farmers work hard to raise cotton with fibers that have the desired characteristics, such as whiteness and the proper fiber length.

**Gin** – Here the fiber is separated from the seed. Organic cotton must be processed separately from conventional cotton, and the machines must be cleaned in advance to avoid any contamination. The seed is used as animal feed or pressed into oils for processed foods.

**Spinning** – The cotton is cleaned to remove any foreign matter, and then 'combed' to align the fibers and remove any that are too short. The fibers are pulled together into a loose yarn called 'sliver', which is then twisted under tension to create yarns. Again, care is required to keep the machines uncontaminated, and to keep the 100% organic cotton separate.

**Did You know?**

**In wild cotton, the boll (the puffy part that becomes fabric) occurs in a variety of shades. Domesticated cotton has been bred to yield white bolls, since white fabric is the easiest to dye. However, dyeing can involve environmentally hostile chemicals. Today organic farmers are experimenting with breeding bolls that are naturally the colours desired for the finished fabric – true "earth tones."**

**Knitting and weaving** – The yarns are made into fabrics. The machines working with 100% organic cotton are separated from the others so that conventional cotton fibers in the air cannot contaminate the organic.

**Dyeing and finishing** – This creates the desired colors and characteristics. For 100% organic products, only chemicals that meet organic fiber processing standards are used. These are the ones that are the least harmful to people and the environment.

**Sewing** – Patterns are cut, pieces assembled, and the final product is sewn, pressed and packaged, ready for the journey. Throughout this process, it is extremely important that the organic cotton is kept separate, clearly identified, and that the certification is tracked. There are many steps and many people, so it involves a lot of diligence to be sure that the cotton in your shirt is actually from a certified organic farm.

## How do you know it's organic?

Check the labels for the words 'organic cotton'. They should tell you what percent of the product is organic cotton. If you want more assurance, ask your retailer to show you certificates to back up the organic cotton claim, or go to the company's website to find out more about how involved they are.


Organic Cotton – Organic farming represents a commitment to a system of agriculture that strives for balance with nature, using methods and materials that minimize impact on the environment. The USDA* National Organic Program prohibits the use of genetic engineering, irradiation or sewage sludge as well as toxic and persistent synthetic pesticides and synthetic fertilizers in organic agriculture and processing. *United States Department of Agriculture

## Setting–and Meeting–Standards

When you choose organic cotton clothing, you want to be confident that the cotton was grown according to a meaningful set of standards, and that it was handled appropriately and carefully tracked while it was processed. The people in the organic fiber industry want to be worthy of your confidence, so they work hard to protect the integrity of the word 'organic.'

The Organic Trade Association promotes and protects the principles of organic agriculture and organic standards. To confirm that these standards are actually met, certifiers visit the farms, walk the fields, review records, and ensure that everything is in compliance before issuing organic certificates to the farmers. There are many such certifying agencies around the world. Many of these agencies are accredited by the U.S. Department of Agriculture, as well as independent organizations such as IFOAM, the International Federation of Organic Agriculture Movements.

Products have different labels, according to how much of the content is organic. Even when a product is not 100% organic cotton, companies are encouraged to identify the percentage that is organic, since this helps the consumer make informed choices, helps the company to sell its products, and helps farmers increase the market for organic cotton. Whatever the percentage of organic cotton, that cotton must be certified by a recognized certifier as being grown and processed according to USDA standards.




## The four principal labels for fiber products are:

'100% organic cotton' must contain 100% organically produced cotton, including any sewing thread.

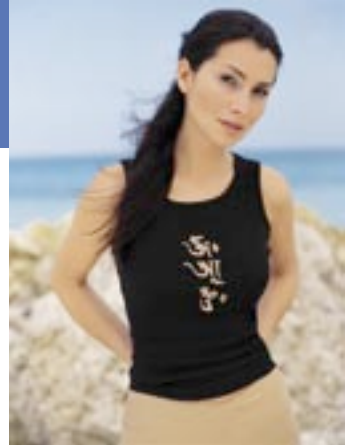
'organic cotton' must contain at least 95% organically produced cotton.

'made with organic cotton' must contain at least 70% organically produced cotton.

'made with x% organic cotton' must contain the percentage of organically produced cotton indicated.

There are many rules that govern the use of the term organic. It is very difficult to make a finished garment without any use of chemicals, but the organic industry is working hard to ensure that all the processing is carried out to the highest possible standards. Manufacturing methods evolve constantly as new knowledge emerges, and as new inputs and processes are developed. For in-depth, up-to-date information, please visit www.ota.com/standards.fiberstandards.html.

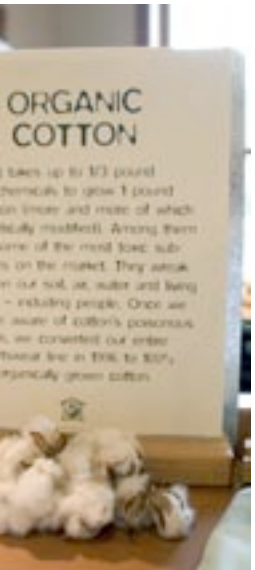
# FAQs



## Is organic cotton different in fiber quality from conventional cotton?

Organic cotton (oc) will have similar fiber properties to conventional cotton grown in the same geographical region.

## What factors influence the quality of the cotton?




The biggest factor is the weather—the more heat it is exposed to, the longer the fibers. The length of the fiber is referred to as the 'staple length'. Fine count yarns, like those that would be used in a dress shirt, require longer staple cotton. Jeans and T-shirts are medium staple; socks and cotton balls can be made with short staple. There is the full range of staple lengths available in oc. For more information about cotton qualities see: www.ams.usda.gov/cotton.

## What kind of oc fabrics are available?

There is a full range of oc fabrics: 100% oc; organic/conventional cotton blends; oc blended with soy, hemp, silk, wool, polyester, and more. Companies choose to blend to enhance the performance of the fabric (for example, hemp has anti-fungal properties) or to reduce the cost.

## Why only 5%? Why not 100%?

Some companies that are consuming large volumes of cotton use the blending model to support the conversion of greater acreage. While 5% of oc may not seem to be much, the total volume used by the programs provides farmers with the stability and momentum to convert more acreage to organic farming, and helps to grow the industry at a sustainable rate.

# FAQs

## Where is organic cotton grown?


This map shows where organic cotton is currently grown. As you can see, organic cotton affects people of widely different cultures. As more of the world gets involved, and production increases, we will update the information at www.AboutOrganicCotton.org.

## Are there any other organic fibers?

Yes - wool, silk, hemp, and linen can now be found in organic, and more is coming all the time.

## Where can I buy it?

Boutiques, spas, department stores, home and lifestyle shops, websites, catalogs, environmental stores, natural food supermarkets, high fashion runways, and mass market retailers.



# THANK YOU

Countless individuals have contributed to the growth of the organic cotton movement, each with their own tales of setbacks and successes. It's thanks to their hard work, persistence and vision that the industry is where it is today. Sadly, lack of space prevents us from listing all these people here, let alone all their accomplishments. We encourage you to visit www.AboutOrganicCotton.org to see who's who in the history of organic cotton.

Being a pioneer is not easy; it's a key role that often goes unrecognized. To all of the farmers, manufacturers, brands, certifiers, organizations, and individuals out there: THANK YOU!

**Did YOU know?**

**If you snuggle up to a cotton-covered pillow or to a loved one who's wearing a flannel shirt, you're a "tree hugger" – even if you've never thought of yourself that way: the original, wild cotton plants were shrubs that bore tiny bits of cotton called lint.**

## Meat the Issue: Fiber in Food

"You are what you eat" has long been a mantra among health-conscious consumers. Many folks are leery of the chemicals applied to conventionally grown fruits and vegetables. They make an effort to seek out organically grown produce. But you don't have to be a vegetarian to share a concern about what goes into your food. If you enjoy juicy burgers, thick milkshakes, or cheese, you still are what you eat—and whatever you eat ate.

A lot of what beef and dairy cattle ate may well have come from cotton plants: cotton straw, cottonseed meal, and waste from cotton mills. Because these are all considered by-products, cotton is not regulated as a food crop. It can be grown using all the questionable chemicals discussed earlier. This is curious since the majority of the cotton plant actually ends up in our food supply. Even if you're not a meat eater, you are probably still a cotton eater: by weight, 60% of of the harvested cotton is seed, which is pressed into oils that are used in everything from cookies to canned tuna.

Organically grown cotton plants can be used to make feed or food in every way that convention cotton can, supplying all of the same nourishment, with none of the health concerns.


PIC of child eating yogurt

**Symbiosis**

Rather than taking a scorched earth approach by controlling insects with pesticides, organic farmers may enlist insect allies – control species called "beneficials" – that feed upon the pests. The farmers gain a greater crop yield; the beneficials gain a food source.

# Call to ACTION

Play your part in the symbiosis.

## What can you do to be a partner in change?

**As a consumer:**

- share what you've learned from this book with your friends and family
- go to www.AboutOrganicCotton.org to learn more, or visit the other websites listed at the back of this book
- choose organic cotton whenever possible, and support the companies that are making it
- ask your retailers about organic cotton, and encourage them to carry more
- buy organic foods and personal care products, donate your used clothing, use environmentally friendly detergents, and save electricity by hanging your clothes to dry!

**As a manufacturer or retailer:**

- use organic cotton in your own products, and carry organic cotton products from others
- ensure that the organic cotton you use has been certified
- share this book, and the Woven through Life pamphlet, which covers the basics about organic cotton, with customers, staff and suppliers by printing or ordering your own copies from www.AboutOrganicCotton.org
- educate your customers, as well as your suppliers, whenever you have the opportunity
- join groups such as the Organic Trade Association and the Organic Exchange. Support the growth of the industry, and keep yourself informed.

**And, if you're an organic cotton farmer:**

Thank you and keep up the good work!

**Did YOU know?**

**Farmers using conventional chemical pesticides are caught in a trap: The more pesticides they use, the more resistant to chemicals the cotton-eating boweevil bugs become. That forces the farmers to apply ever-higher concentrations of chemicals. The only winners in this race are the companies selling pesticides.**

call to action

## What's The Business Case for Organic Cotton?

Why should a business adopt and support organic cotton? Because it's good business. The companies taking a role in the growth of the organic cotton market are innovation leaders. Many businesses do it for strategic reasons: to take advantage of the media's attention to green and organic fibers, to introduce new product categories to capture expanded markets, or to find new ways to build trust and engage with their customers around a unique and compelling story.

For all businesses, working with organic cotton is a chance to work more closely with their supply chains, and to be part of a larger, collaborative community with lots of experience and advice to share. Many companies have corporate social responsibility goals, and for them, using organic cotton is a "natural fit" – a chance to do well while doing good.



# Incorporating ORGANIC COTTON

The two most popular options are:

### blending

You can choose to blend any percentage of organic cotton into the regular cotton products you produce or sell. The benefits of blending include:

- minimizing costs while still making a positive impact and having a distinctive story to tell
- stabilizing and encouraging organic cotton production

You can easily increase the amount of organic fiber you use by increasing the percentage, or by adding more products with organic cotton.

### 100%

Make a strong statement, and convert some or all of your products to 100% organic cotton. The benefits include:

- having a strong story to tell about how your company is creating positive change
- being recognized as a leader in social and environmental responsibility
- reaping the maximum attention from the media's interest in organic cotton
- providing the largest possible support for organic farmers

# RESOURCES

## Organic Cotton Information Resources

**www.ota.com**
The **Organic Trade Association**'s (OTA) mission is to encourage global sustainability through promoting and protecting the growth of diverse organic trade.

**www.organicexchange.org**
The **Organic Exchange** is a non-profit business organization focused on facilitating the growth of a global organic cotton industry.

**www.sustainablecotton.org**
The **Sustainable Cotton Project** focuses on educating farmers, consumers and manufacturers about the impacts of conventional cotton and the ways to transition to organic cotton.

**www.rodaleinstitute.org**
The **Rodale Institute** works worldwide to achieve a regenerative food system that renews environmental and human health.

**www.pan-international.org**
**Pesticide Action Network** (PAN) is a network of over 600 participating non-governmental organizations, institutions and individuals in over 60 countries working to replace the use of hazardous pesticides with ecologically sound alternatives.

**www.consumersunion.org**
The **Organic Consumers Union** is a US-based non-profit publisher of consumer reports. It provides information on consumer issues and promotes consumer action campaigns.

**www.organicconsumers.org**
The **Organic Consumers Association** (OCA) is a grassroots non-profit public interest organization which deals with crucial issues of food safety, genetic engineering, corporate accountability, and environmental sustainability.

**www.texasorganic.org**
The **Texas Organic Cotton Marketing Cooperative** hosts field tours every fall and provides information to other farmers, mills, manufacturers and consumers about organic cotton.

# GLOSSARY of terms

**Accreditation** - Procedure by which an authoritative body gives a formal recognition that a body or person is competent to carry out specific tasks under organic certification.

**Biodiversity** - The variety of life forms and eco-system types on Earth. Includes genetic diversity (i.e., diversity within species), species diversity (i.e., the number and variety of species) and eco-system diversity (total number of ecosystem types).

**Bleaching** - A finishing process that brightens and removes natural and artificial impurities from yarn and fabric using either chlorine, hydrogen peroxide or other substances. Chlorine bleaching has a negative environmental impact, as the waste does not degrade, and is harmful to ecosystems. Organic processing calls for hydrogen peroxide as it degrades relatively quickly, and helps to balance pH in effluent water.



**Breeding** - Selection of plants or animals to reproduce and/or to further develop desired characteristics in succeeding generations.

**Buffer Zone** - A clearly defined and identifiable boundary area bordering an organic production site that is established to limit application of, or contact with, prohibited substances from an adjacent area.

**Certification** - The procedure by which a independent third party gives written assurance that a clearly identified process production or processing system has been methodically assessed, and that adequate confidence is provided that specified products conform to organic requirements.

**Contamination** - Pollution of organic product or land; or contact with any material that would render the product unsuitable for organic certification.

**Conventional** - Any material, production or processing practice that is not certified organic or organic “in-conversion”.

# GLOSSARY

**Conversion period** - The time between the start of the organic management and the certification of crops and animal husbandry as organic.

**Cotton** - Color grown - Cotton plants that are specifically bred to take advantage of their natural coloring in shades of white, brown and green.

**Cotton** - Organic - Cotton grown without any harmful pesticides, herbicides or artificial fertilizers.

**Cotton** - Transitional - Cotton grown during the period of time between the start of the organic management process and the official certification of the organic crops. This transitional period usually takes two to three years.

**Cotton By-products** - As cotton is ginned, short fibers called motes are generated when the seed is separated from the fiber. Conventional cotton seed is sent to an oil compress where the seed is delinted, producing linters, which are short fibers used in paper production. The seed is also pressed to produce cotton seed meal and cotton seed oil.

**Crop Rotation** - The practice of alternating the species or families of annual and/or biennial crops grown on a specific field in a planned pattern or sequence so as to break weed, pest and disease cycles and to maintain or improve soil fertility and organic matter content.

**Dyes** - Low Impact - Better for the environment as they have the lowest impact in terms of temperature, water use and dye exhaustion. They also use no heavy metals, low salt, and are AZO & dioxazines compound free.

**Dyes** - Natural - Pigments are derived from organic materials such as vegetables, berries, bugs, clay, indigo, and other plant extracts.

**Genetic Diversity** - The variability among living organisms from agricultural, forest and aquatic ecosystems; this includes diversity within species and between species.

**Genetic Engineering** - A set of techniques from molecular biology (such as recombinant DNA) by which the genetic material of plants, animals, micro-organisms, cells and other biological units are altered in ways or with results that could

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not be obtained by methods of natural mating and reproduction or natural recombination. Techniques of genetic modification include, but are not limited to: recombinant DNA, cell fusion, micro and macro injection, encapsulation, gene deletion and doubling. Genetically engineered organisms do not include organisms resulting from techniques such as conjugation, transduction and natural hybridization.

**Genetically Modified Organism** (GMO) - A plant, animal, or microbe that is transformed by genetic engineering.

**Green Manure** - A crop that is incorporated into the soil for the purpose of soil improvement. May include spontaneous crops, plants or weeds.

**Irradiation** (ionising radiation) - High energy emissions from radio-nucleotides, capable of altering a food's molecular structure for the purpose of controlling microbial contaminants, pathogens, parasites and pests in food, preserving food or inhibiting physiological processes such as sprouting or ripening. The use of irradiation is not allowed on organic cotton.



**N. G. O.** - (non governmental organization) A non profit organization financed through private funds and grants.

**Natural Fibers** - Materials that grow in nature such as cotton, flax, hemp, alpaca, wool, bamboo, soy and silk.

**Organic Product** - A product which has been produced, processed, and/or handled in compliance with organic standards.

**Recycled Fibers** - Refers to the reclaiming of materials used by consumers and then subsequently processed, broken down and converted into a fibrous state.

**Synthetic Material** - Not of natural origin, these are man-made polyesters and polyvinyl fiber derivatives such as acrylic, nylon and spandex synthesized from petroleum and carbon derivatives.

**Symbiosis**

`simbI'owsis
[n] the relation between two different species of organisms that are interdependent; each gains benefits from the other

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**Timberland**

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