

Step-by-Step Guide to Composting 100% Cotton, Jeans, Clothing & Cotton Waste

by

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According to cottontoday.com, composting 100% cotton fabrics, clothing, and cotton waste can contribute significantly to the organic matter content of compost, enriching its nutrient profile. Composting takes time, but by following a few basic steps, you will have rich organic matter in 6-12 months. Optimal composting requires sufficient moisture, warmth, oxygen, and microbial activity.

Step-by-Step Guide to Composting 100% Cotton (and jeans):

1. Confirm the Material

- Make sure the jeans are **100% cotton**...look at the label
- Check for **synthetic blends** (like polyester, elastane, or spandex). If any synthetic (plastic) fibers are listed, the clothing, jeans, or textile cannot be composted.
- Remove all:
 - Zippers
 - Buttons
 - Rivets
 - Synthetic threads (if possible)
 - Tags or labels (often polyester or nylon)

2. Cut or Shred the Fabric

- **Cut the jeans into small pieces**, ideally 1–2 inch squares or strips by using a rotary cutter or fabric scissors...this speeds up biodegrading time.

3. Balance the Compost Pile

- Denim counts as a **“brown” (carbon-rich)** material.
- Pair with plenty of **“greens” (nitrogen-rich)** like:
 - Food scraps (fruit/veg peels)

- Grass clippings
- Coffee grounds

4. Layer and Mix

- Alternate layers of shredded denim with greens.
- Maintain a good mix (approx. **2 parts brown to 1 part green**).
- Don't overload your compost with denim—keep it to **less than 25%** of the total volume.

5. Maintain the Pile

- **Aerate:** Turn the compost regularly (every 1–2 weeks).
- **Moisture:** Keep it damp like a wrung-out sponge. Add water if it's too dry.
- **Temperature:** A hot compost pile (130–160°F or 54–71°C) will break down denim faster.

6. Be Patient

- Even under good conditions, denim may take **6–12 months** (or more) to fully decompose.
- If large pieces remain after this time, remove and re-cut them before reintroducing.

Optional Tips:

- **Use a fabric-only compost bin** if you do this often, to avoid confusing your regular food compost.
- If you don't compost at home, look for **textile recycling** or **industrial composting facilities** that accept natural fabrics.

Factors That Affect Biodegradation Time:

- **Fabric Thickness & Weave:** Denim is thick and tightly woven, which slows down decomposition.
- **Dyes & Finishes:** Synthetic dyes, chemical treatments, or water-resistant coatings can significantly delay biodegradation.
- **Environment:**
 - **Compost heap:** 1–5 months

- **Landfill:** 10+ years
- **Buried in soil:** 6 months to several years, depending on conditions