Textile Exchange

Materials Market Report

September 2025

Contents

Cover photo: Kin Chan Coedel

Introduction

About this report

Welcome to the 12th edition of Textile Exchange's Materials Market Report.

The *Materials Market Report*, first launched in 2013, is a comprehensive, annual publication that provides unique data and insights into global fiber and raw material production, helping the industry to measure and make progress toward its goals. We believe that climate action starts at the source of the materials we choose.

The *Materials Market Report* shares the best available data on global fiber and material production volumes alongside program-specific volumes and other insights. It is not within the scope of the *Materials Market Report* to assess programs or standards, and the information should not be used or considered as advice or recommendation in any direction.

For the purpose of this report, leather, rubber, and down are considered non-fiber raw materials and are therefore included separately from global fiber data.

It's important to recognize that compiling global market data on fibers and raw materials is challenging, and the quality of available data is often limited. The collection of primary data from suppliers is beyond the scope of this report, so we rely on secondary data from industry associations, international organizations, governmental organizations, standard setters, and research institutes. While Textile Exchange has collected, analyzed, and compiled this information in good faith and has cross-checked it wherever possible, the report is intended for general guidance and informational purposes only. Due to common gaps and inconsistencies in global market data, modeling has frequently been applied.

For many years, Textile Exchange has worked on improving data quality and increasing transparency in the industry. However, there is a lot more work to be done, and we encourage the industry to help us further improve the quality and accessibility of global fiber and raw materials production data. Only through collaboration and joint efforts can we measure our progress and achieve our goals.

We sincerely thank all those who have contributed data or information to this report for making it possible.

Important note about the scope of data included in this report

This report covers total fiber and raw material production volumes, irrespective of whether they are used for apparel, home textiles, footwear, or any other application.

Textile Exchange is aware of the interest in understanding the proportion of fiber and raw material production volumes that can be attributed to apparel, footwear, and home textiles. Since data on this is currently very limited, Textile Exchange is working on a project to improve this data. In the meantime, as a starting point and to aid interpretation of the data included in this report, Textile Exchange has included very rough estimates of the breakdown of fiber and material volumes by product application on page 8.

Photo: Jacopo Bille

Executive summary

The global fiber market

Global fiber production increased from around 125 million tonnes in 2023 to a record **132 million tonnes** in 2024. This is predominantly due to growth in the production of new virgin fossil-based synthetics.

Since 2000, when global fiber production was 58 million tonnes, production has more than doubled and it is **expected to grow to 169 million tonnes** in 2030 if business as usual continues. While the industry has made commitments to align with the Paris Agreement by keeping global warming to a 1.5°C pathway, trends, such as the industry's reliance on virgin fossil-based synthetic materials and the limitations of textile-to-textile recycling, threaten to undermine the industry's commitments to its climate goals.

The market share of **recycled fibers** remained at around **7.6%** in 2024. The vast majority of this was recycled polyester made from plastic bottles, which accounted for 6.9% of all fiber produced worldwide. Overall, less than 1% of the global fiber market was from pre- and post-consumer recycled textiles.

Cotton

Cotton remains the **second most widely produced fiber** after polyester. Global cotton fiber production decreased from 24.8 million tonnes in 2022/23 to **24.5 million tonnes** in 2023/24, with cotton's share of the global fiber market decreasing from 20% to 19% during this period.

The market share of virgin cotton covered by the programs that shared data for this report increased to an estimated **34%** in 2023/24, up from 31% in 2022/23.

Better Cotton, including its equivalents Agro-2, Integrated Production System of Andalucía, Spain (IPS), Israel Cotton Production Standard System (ICPSS),myBMP, and Responsible Brazilian Cotton (ABR), made up the majority of this 34%, accounting for 23% of all virgin cotton produced in 2023/24. Better Cotton without its equivalents accounted for around 9% of all cotton grown in 2023/24, ABR for 12%, myBMP for 2%, Agro-2 for 0.5%, ICPSS for 0.1%, and IPS for 0.03%.

All other cotton programs that shared data for this report (including Climate Beneficial™ Verified, Fairtrade, International Sustainability and Carbon Certification, organic, Organic Cotton Accelerator, REEL Cotton Code, REEL Regenerative Code, regenagri, Regenerative Cotton Standard®, Regenerative Organic Certified®, and the U.S. Cotton Trust Protocol) had a combined market share of around 11% of global cotton production in 2023/24.

Polyester

Polyester continues to be the **most widely produced fiber** in the world, accounting for 59% of global fiber production in 2024, up from 57% in 2023. In terms of volume, polyester fiber production increased from 71 million tonnes in 2023 to **78 million tonnes** in 2024.

Recycled polyester fiber production increased from around 8.9 million tonnes in 2023 to around **9.3 million tonnes** in 2024. However, due to the larger increase in virgin polyester production, there was a **decrease in the overall market share** of recycled polyester from around 12.5% of global polyester production in 2023 to around **12.0%** in 2024.

Systems for polyester **textile-to-textile recycling** are in development but are only estimated to account for around **2%** of all recycled polyester. The interest in, and use of, ocean or ocean-bound plastic is increasing, but overall market shares remain very low and make up less than 0.005% of all recycled polyester. Recycled polyester is still primarily made from plastic bottles (98%).

The market share of **biobased polyester** fiber remained very low at around **0.01%** of global polyester production—mainly due to issues around price and availability, as well as questions about the sustainability of currently available biobased polyester. The report also highlights new innovations, such as fibers made from captured CO_2.

Executive summary

Polyamide (nylon)

Polyamide (nylon) is the **second most used synthetic fiber** and made up 5% of the global fiber market in 2024, with **7 million tonnes** produced globally. Due to technical recycling challenges and comparatively lower prices for new virgin fossil-based polyamide, **recycled polyamide** continues to make up only **2%** of the total polyamide market share. Most recycled polyamide is made from pre-consumer waste or materials such as discarded fishing nets and carpets, but there is also a lot of potential for post-consumer textiles to be used as feedstock.

The market share of **biobased polyamide** fibers in 2024 remained low, at around **0.4%** of the global polyamide fiber market. Similar to the reasons for the low uptake of biobased polyester, price, availability, and questions about the sustainability of biobased polyamide dampened growth in the market.

Manmade cellulosic fibers

Production of manmade cellulosic fibers (MMCFs), including viscose (rayon), lyocell, modal, acetate, and cupro, increased from 7.9 million tonnes in 2023 to **8.4 million tonnes** in 2024. MMCFs continued to account for **6%** of the global fiber market.

MMCFs produced using Forest Stewardship Council (FSC) and/or Programme for the Endorsement of Forest Certification (PEFC)-certified or controlled feedstock had an estimated market share of **65–70%** of all MMCFs in 2024.

The market share of MMCFs made from **recycled feedstocks** increased from an estimated 0.7% in 2023 to **1.1%** in 2024. This growth is expected to continue thanks to ongoing research and development. With organizations such as bluesign® and Zero Discharge of Hazardous Chemicals (ZDHC) introducing standards at the pulp and fiber level, change is also likely at these stages of the supply chain.

Wool

Global sheep wool production remained at around **1 million tonnes** of clean wool fiber in 2024, with wool accounting for 0.9% of the global fiber market.

The combined market share of wool produced according to the Responsible Wool Standard (RWS), ZQ, ZQRX, SustainaWOOL Green (SustainaWOOL under AWSS), Sustainablue (ResponsiWOOL under AWSS), SustainaWOOL Gold, Sustainable Cape Wool Standard, and Climate Beneficial™ Verified decreased from around 5.2% in 2023 to 4.3% in 2024, with these wool programs all seeing **reduced or unchanged production volumes**. For the RWS, this trend is attributed to low wool prices in 2024 and certified wool often not receiving a sufficient premium.

Recycled wool accounted for around **7%** of the global total wool market in 2024.

Mohair

An estimated **4,748 tonnes** of greasy mohair fiber were produced globally in 2024. The market share of the Responsible Mohair Standard (RMS) reached **50%** in 2024, up from 47% in 2023. RMS accounted for 90% of total mohair production in South Africa and 51% in Australia in 2024.

Alpaca

Global alpaca fiber production was estimated to be **6,200 tonnes** in 2024. The global market share of the Responsible Alpaca Standard (RAS) was **7%**, with all RAS-certified production coming from Peru, where RAS accounted for 10% of the country's total alpaca fiber production.

Photo: Tristan McKenzie

Executive summary

Cashmere

Global cashmere production was estimated to be **25,611 tonnes** of greasy fibers in 2024. The combined market share of cashmere produced according to Agronomists and Veterinarians Without Borders (AVSF) Sustainable Cashmere Certification, The Good Cashmere Standard®, Responsible Nomads, and Sustainable Fibre Alliance (SFA) Cashmere Standard was estimated to be **36%** in 2024, similar to that in 2022, and following a peak in 2023 when the market share was 47%. These fluctuations are attributed to low market demand and certified cashmere not being sufficiently rewarded by the market.

Other fibers

Other fibers—from hemp to elastane—are starting to gain traction in the industry. Beyond the fibers already mentioned, this report also covers other plant-based fibers (jute, coir, flax, hemp, sisal, abaca, kapok, ramie, and agave fibers), other animal fibers (angora rabbit, camel, guanaco, llama, vicuna, and yak hair), and other synthetic fibers (polypropylene, acrylic, and elastane).

Other raw materials

Leather

Leather, measured in terms of raw hides of cattle, sheep, goats, and buffalo, had an estimated global production volume of **13.8 million tonnes** in 2024. Cattle hides were the most used type of hide with an estimated 9.4 million tonnes produced, followed by sheep hides at 2.2 million tonnes, goat hides at 1.5 million tonnes, and buffalo hides at 0.8 million tonnes.

For leather, most standards cover the processing stage. While multiple standards cover animal welfare for meat production, only a few small supply chains currently manage to maintain traceability of the hides of certified animals through to finished leather goods.

Down

Global down production was estimated at around **0.67 million tonnes** in 2024, up from 0.63 million tonnes in 2023. Of this, 0.66 million tonnes were virgin down and **0.01 million tonnes** was **recycled down**. The market share of the Responsible Down Standard (RDS) declined slightly, from 3.3% of the virgin down market in 2023 to 3.0% in 2024. DOWNPASS had an estimated market share of around 1% in 2024. RDS and DOWNPASS are primarily animal welfare standards.

Rubber

Global natural rubber production totaled just under **15 million tonnes** in 2024. The market share of rubber forest covered by the FSC and PEFC increased from around 2.9% in 2023 to **3.2%** in 2024.

Photo: Cecilie Nicoline Rasmussen

Estimating the breakdown of fibers and materials by product application

Fibers and materials are used for a broad range of applications. The *Materials Market Report* focuses on Tier 4 (raw material production and primary processing) and therefore reports volumes irrespective of their use further down the supply chain.

Textile Exchange recognizes the interest in understanding the proportion of fiber and raw material production volumes that can be attributed to apparel, footwear, and home textiles. To this end, in recent years, we have undertaken targeted efforts to begin modeling and estimating the attribution of each fiber category to various product applications, for example apparel, home textiles, and other categories. The findings are shared on this page.

It is important to note that this remains a challenging task for many reasons, including the lack of centralized data sources segmenting fiber and material usage in this way, as well as determining how to accurately measure and attribute loss rates throughout the supply chain. Therefore, these estimates should be used and interpreted with caution and they are subject to change in future years. Due to the high level of data uncertainty, the estimates are presented as ranges.[1]

Textile Exchange is committed to continuing its work to improve this methodology and the corresponding "sector split" estimates. We are currently working on a project to further refine these estimates and will share the findings when available.

Global fibers[1]

Cotton is mainly used for apparel, accounting for around 60–70% of all cotton. Approximately 20–30% of all cotton is used for home textiles, and about 10% for other products.

Wool is also primarily used for apparel, accounting for around 60–70% of total sheep wool. Approximately 30–40% of all sheep wool is used for home textiles, with the remainder used for other applications.

Other animal fibers such as cashmere, mohair, alpaca, and silk are predominantly used for apparel.

Around 30–60% of **polyester** fibers are used for apparel, 20–35% are used for home textiles, and the remainder is used for various other applications.

Polyamide fiber is used in various applications. Estimates range widely, from less than 10% to more than 50% of global polyamide fiber being used for apparel. A significant share of polyamide fiber is used for home textiles such as carpets, as well as technical and industrial applications.

Manmade cellulosic fibers such as viscose (rayon), lyocell, modal, and cupro are mainly used for apparel, accounting for around 50–80% of all MMCFs. An exception is acetate fibers, which are used primarily for cigarette filters, with only a small percentage (about 5%) used for apparel.

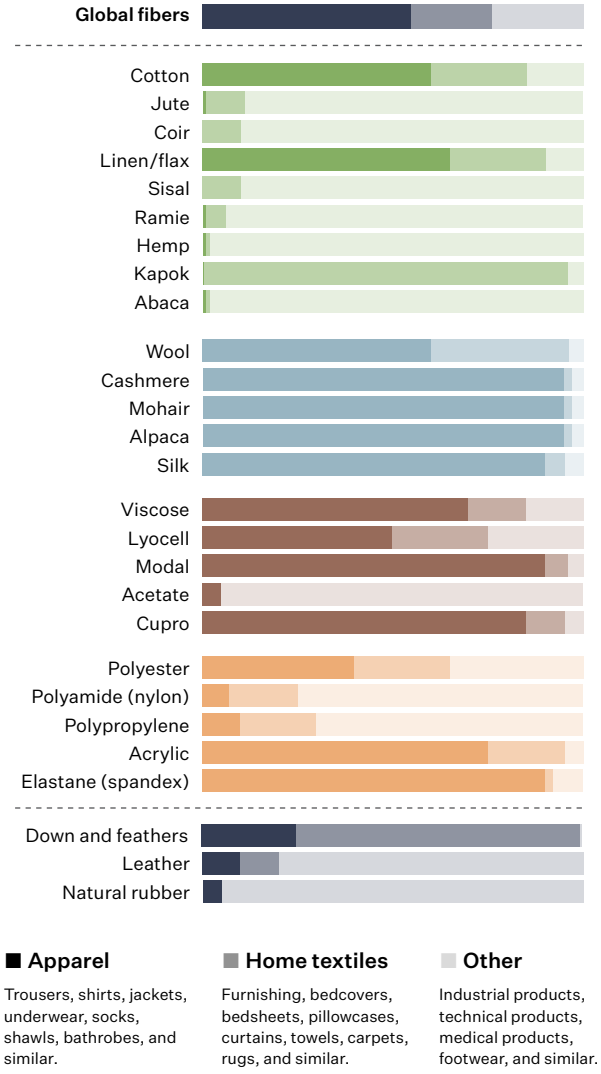
Other raw materials (non-fiber)

Around 60–80% of **down and feathers** are used for home textiles such as bedding and pillows, with a smaller percentage used for apparel.

Leather is mainly used for footwear, which accounts for around 40–50% of all leather. Around 5–10% is used for apparel, 10–15% for home textiles, and the remainder for other applications such as leather goods (bags), the automotive industry, or other products.

Natural rubber is primarily used for tire production, which accounts for around 65–70% of all natural rubber use, with only a small percentage used for apparel.

Estimated breakdown of fibers and materials by product application[2]



1 Please note that the percentage estimates provided on this page exclude waste and other losses from the supply chain.

2 Please refer to the context provided on this page if utilizing information from this chart.

The global fiber market

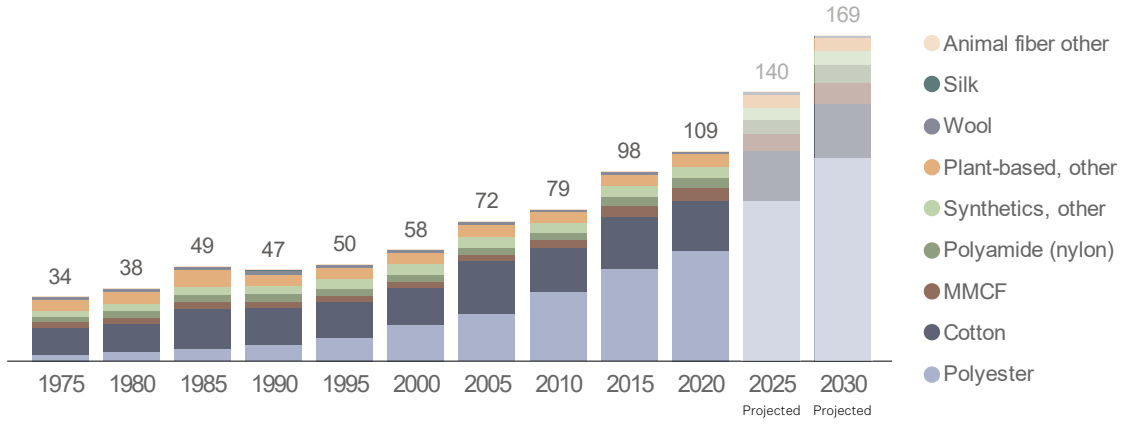
Global fiber market trends

Global fiber production increased to a record 132 million tonnes in 2024, up from 125 million tonnes in 2023.[1] Since 2000, when production was 58 million tonnes, global fiber production has more than doubled and is expected to grow to 169 million tonnes in 2030 if business continues as usual.

Polyester has contributed most significantly to this growth, replacing cotton as the most widely used fiber in the world since the mid-to-late 2000s.

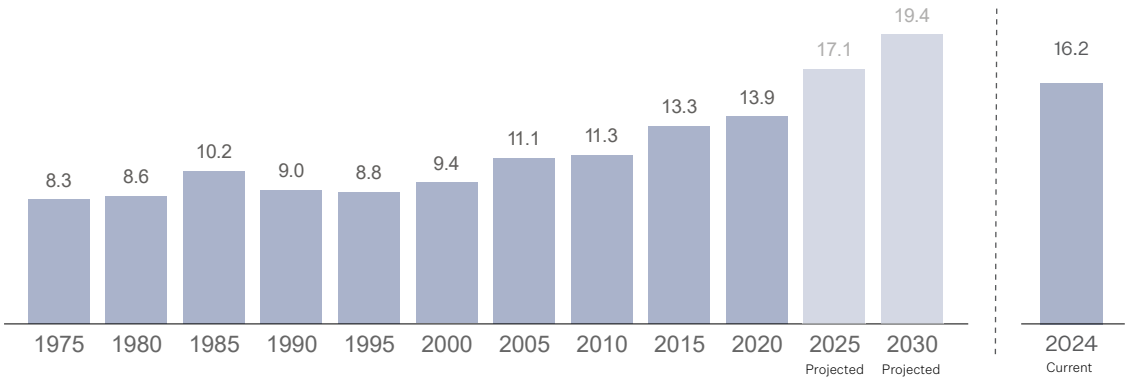
Global fiber production per person has also increased significantly, growing from 8.3 kilograms per person in 1975 to **16.2 kilograms per person in 2024**.[2] This figure is expected to rise to 19.4 kilograms per person by 2030 if business continues as usual.

Global fiber production (million tonnes)[1]



Source: Textile Exchange based on data from CIRFS, FAO, ICAC, IVC, IWTO, Maia Research, and its own modeling.

Global fiber production (kilograms per person)[2]



Source: Textile Exchange based on UN data and global data compilation.

1 Textile Exchange compilation based on data from ICAC, FAO, IWTO, Mohair South Africa, CIRFS, IVC, Maia Research, and its own modeling. Volumes of certain minority fibers such as PTT, carbon, aramid, PLA, PBS, and PEF are not included. Cotton production volumes are collected in accordance with the harvest year used by ICAC, which runs from August 1 to July 31, with volumes allocated to the later calendar year (for example, 2023/24 cotton production is allocated to the 2024 calendar year) except for Brazil, for which data is collected by calendar year and aligns with the earlier year (for example, Brazil's 2023 cotton production is reported as 2023/24) as per the methodology of ICAC and USDA, revised in 2023. MMCF and synthetic fiber volumes include staple fiber and filament. Please note that the percent market shares may differ from other sources due to: (1) our overview including other plant fibers, other wool, and silk—all of which are often excluded from global statistics—and (2) different cotton year allocations. In general, all global figures are estimates.

2 Textile Exchange based on UN Population Division, 2024. World Population Prospects 2024 and volume data as specified in footnote (1).

The global fiber market 2024

Synthetic fibers

Synthetic fibers have dominated the fiber market since the mid-1990s. At around 91.0 million tonnes, this fiber category made up approximately 69% of global fiber production in 2024.

Polyester alone had a market share of around 59% of global fiber production in 2024, with approximately 77.7 million tonnes produced.

Polyamide (nylon), the second-most used synthetic fiber, accounted for 7.0 million tonnes and approximately 5% of the global fiber market in 2024.

Other synthetics—polypropylene, acrylic, and elastane—had a combined market share of 5% in 2024, with a total production volume of 6.3 million tonnes.

Plant fibers

Plant fibers had a market share of around 24% of the global fiber market in 2024, with a combined production volume of 31.3 million tonnes.

Cotton is the second-most important fiber globally in terms of volume. At around 24.5 million tonnes, it had a market share of approximately 19% of global fiber production in 2024.

Other (non-cotton) plant-based fibers (including hemp, flax, jute, coir, other bast fibers, sisal, manila, kapok, agave, and ramie) had a combined market share of around 5%, with 6.9 million tonnes produced in 2024. Flax had a market share of around 0.3% in 2024, with around 0.3 million tonnes produced, while hemp had a market share of 0.2%, with 0.3 million tonnes produced.

Manmade cellulosic fibers

Manmade cellulosic fibers (MMCFs) had a market share of around 6% in 2024, with a global production volume of around 8.4 million tonnes.

Viscose (rayon) accounted for the majority of MMCF production at 6.7 million tonnes, accounting for around 5% of global fiber production.

Other MMCFs (including acetate, lyocell, modal, and cupro) had a combined market share of 1.3%.

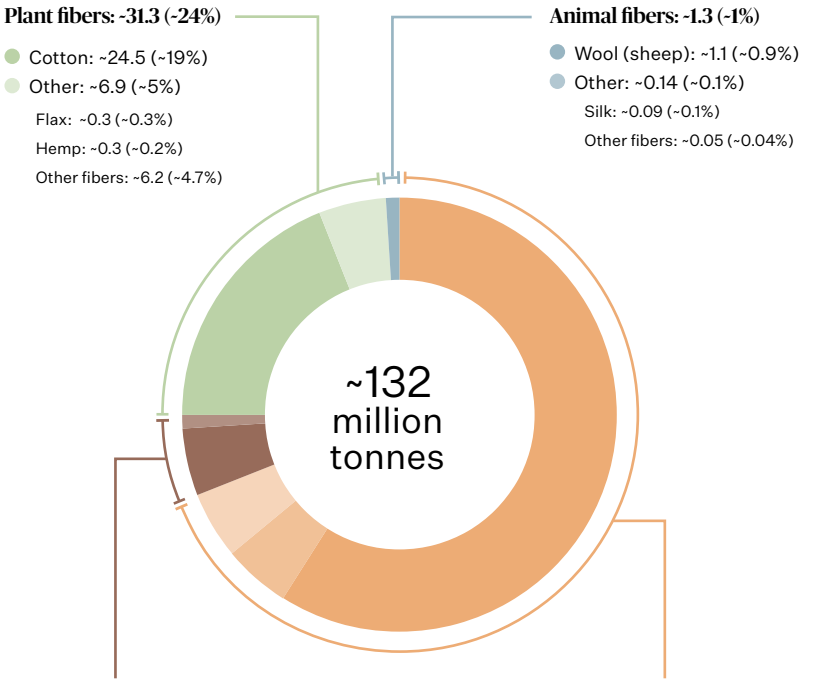
Animal fibers

Animal fibers continued to have a combined market share of around 1% in 2024.

Wool made up the majority of this, with global clean wool production totaling around 1 million tonnes and accounting for 0.9% of global fiber production.

Other animal fibers (beyond wool) had a market share of 0.1%, with silk making up the majority of this.

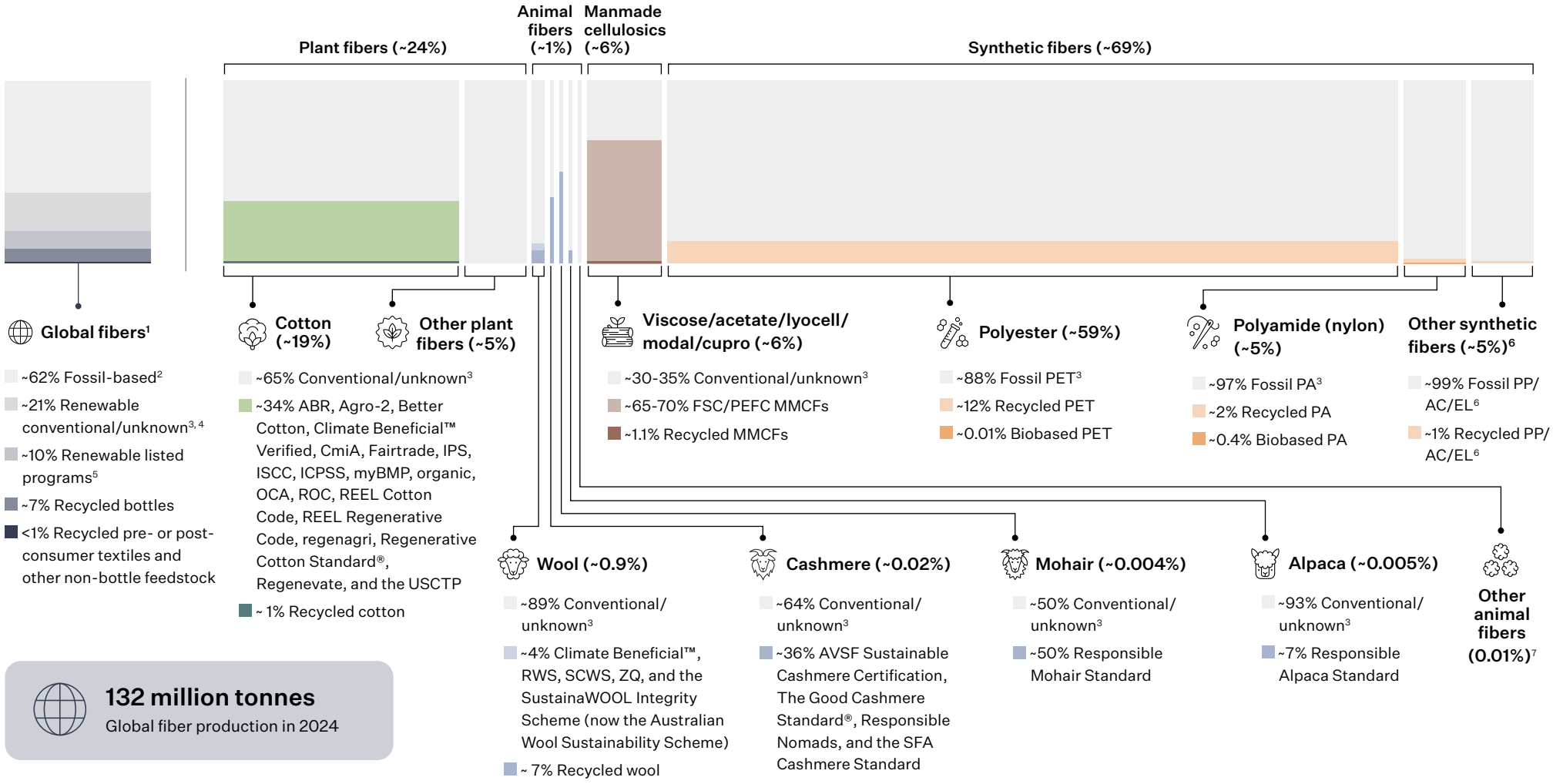
Global fiber production in 2024
(in million tonnes and % of global fiber production)



Source: Textile Exchange based on data from CIRFS, FAO, ICAC, IVC, IWTO, Maia Research, Mohair South Africa, and its own modeling.

NOTE: This chart includes recycled fibers. Other animal fibers included here are alpaca, angora, camel, cashmere, guanaco, llama, mohair, vicuna, and yak. Other plant fibers included here are jute, coir, sisal, abaca, ramie, kenaf, kapok, and agave. Leather, down, and rubber are not included as they are considered non-fiber raw materials for the purpose of this report.

The global fiber market 2024: Program overview



1 This graph aims to inform the industry about global total fiber production volumes and the shares covered by different programs.
2 Fossil-based is calculated as the synthetics total excluding recycled and biobased synthetics.
3 Conventional/unknown includes volumes of programs for which data is not accessible or available.
4 Renewable conventional/unknown is calculated as the global fiber total excluding fossil-based, the renewable listed programs, recycled bottles, and recycled pre- or post-consumer textiles, and other non-bottle feedstock.
5 Renewable listed programs include all the programs listed in this chart apart from the recycled fibers.
6 Other synthetic fibers include polypropylene (PP), acrylic (AC), and elastane (EL).
7 Other animal fibers include angora, camel, guanaco, llama, vicuna, yak, and silk.

The global recycled fiber market

The market share of recycled fibers remained at around 7.6% in 2024. The vast majority of this was recycled polyester made from plastic bottles, which accounted for 6.9% of all fiber produced worldwide. Overall, less than 1% of the global fiber market was from pre- and post-consumer recycled textiles in 2024.

Virgin fiber production volumes increased from 115 million tonnes in 2023 to 122 million tonnes in 2024, primarily driven by the increase in new virgin fossil-based fibers from 75 million tonnes in 2023 to 81 million tonnes in 2024.

Polyester continued to have the highest proportion of recycled fibers in 2024, at around 12.0%. Although this represents a decline from 2023, when the market share of recycled polyester was around 12.5%, absolute recycled polyester production volumes increased slightly. Around 98% of recycled polyester came from plastic bottles in 2024.

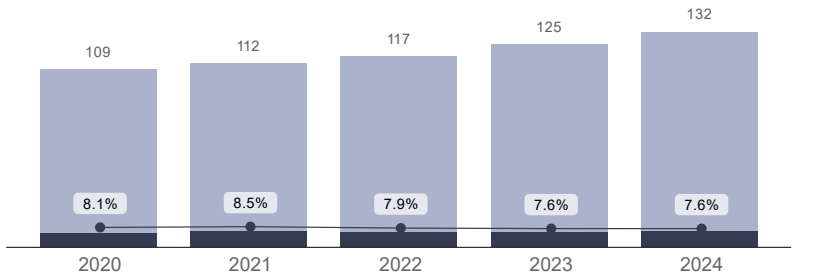
It is estimated that recycled elastane made up around 3% of total elastane production in 2024, while recycled polyamide (nylon) made up around 2%, recycled acrylic around 0.8%, and recycled polypropylene around 0.4% of their respective fiber volumes.

Wool had the second-highest recycled fiber share in 2024, at about 7%, while the market share for recycled cotton was estimated to be roughly 1%. The market share of MMCFs made from recycled feedstocks was around 1%.

Recycling fibers from blended textiles

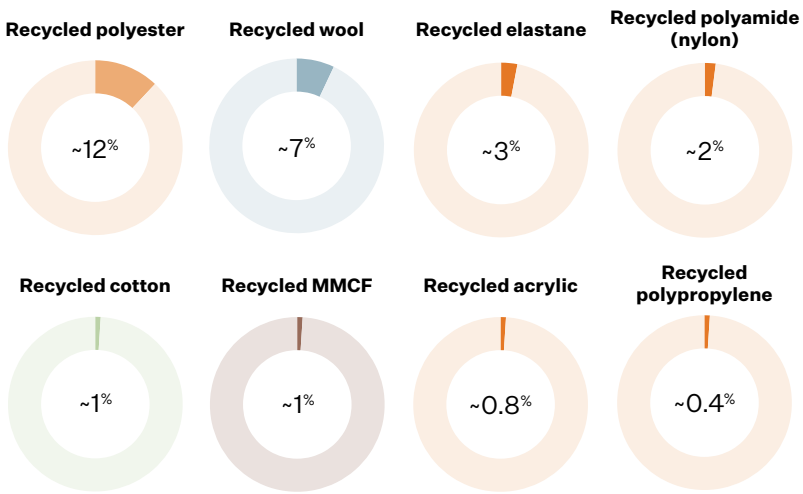
The proliferation of textiles made from fiber blends—such as cotton and polyester or elastane—poses significant challenges when it comes to recycling post-consumer textile waste. This is due to the labor-intensive separation process of the different fiber types and the different conditions required for chemical and mechanical recycling. Chemical recycling technologies can help overcome complications associated with the mechanical recycling of textiles and some innovative startups are working on solutions to make high-value fiber blend recycling possible.

Global fiber production (million tonnes and % recycled)



Source: Textile Exchange based on data from CIRFS, FAO, ICAC, IVC, IWTO, Maia Research, and its own modeling.

Market share of recycled within each fiber category in 2024



Source: Textile Exchange based on Maia Research and global data compilation.

The global fiber market

Cotton

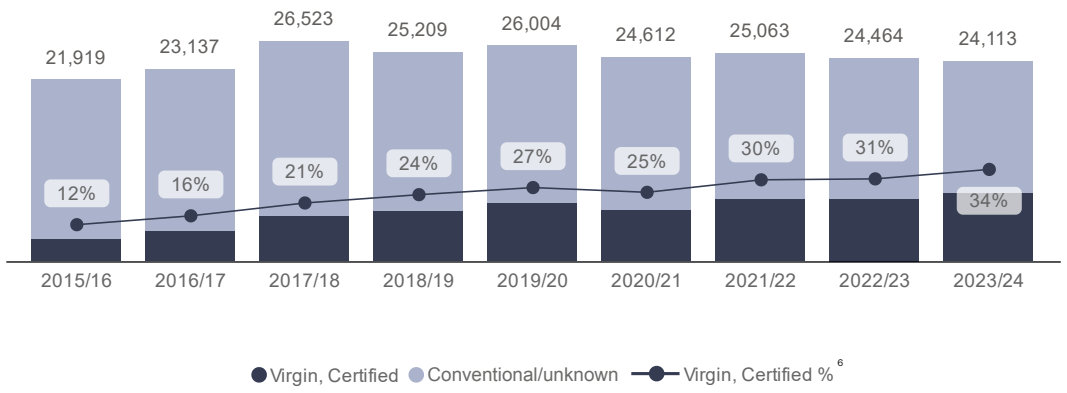
Virgin cotton
Global cotton production

Globally, the production of virgin cotton fiber decreased from 24.5 to 24.1 million tonnes between 2022/23 and 2023/24.[1] Cotton covered by the programs that shared data for this report[2] had a combined production volume of around 8.3 million tonnes in 2023/24 and accounted for around 34% of all virgin cotton fiber, up from 31% in 2022/23.[3]

Better Cotton, including its equivalents[4] Agro-2, Integrated Production System of Andalucía, Spain (IPS), Israel Cotton Production Standard System (ICPSS), myBMP, and Responsible Brazilian Cotton (ABR), made up the majority of this 34%, accounting for around 23% of all cotton grown globally in 2023/24. Better Cotton without its equivalents accounted for around 9% of all cotton grown in 2023/24, ABR for 12%, myBMP for 2%, Agro-2 for 0.5%, ICPSS for 0.1%, and IPS for 0.03%.

Other cotton programs, including Climate Beneficial™ Verified, Cotton made in Africa® (CmiA), Fairtrade, International Sustainability and Carbon Certification (ISCC), organic[5], Organic Cotton Accelerator, REEL Cotton Code, REEL Regenerative Code, regenagri, Regenerative Cotton Standard®, Regenerative Organic Certified®, Regenevate, and the U.S. Cotton Trust Protocol (USCTP), had a combined market share of around 11% of global cotton production in 2023/24.[3]

Global cotton fiber production (thousand tonnes) and share of programs (%) [2]



Source: Textile Exchange based on ICAC and cotton program owners.

NOTE: This chart only includes virgin cotton and not recycled cotton.

1 ICAC, 2025. World Cotton Statistics. Downloaded on May 12, 2025.

2 The programs included for virgin cotton are those listed in the global cotton fiber production by program chart, plus Cleaner Cotton and e3® Sustainable Cotton for historical data (discontinued after 2019/20 and 2022/23, respectively). The figures presented here cover only virgin cotton and do not include recycled cotton, which is covered in the recycled cotton chapter. Note that the cotton programs included in this report no longer directly correlate with the list of programs included in the 2025 Sustainable Cotton Challenge.

3 Textile Exchange based on the source referenced in footnote (1) and cotton program data provided by the programs. Overlaps between programs are excluded where possible, but minor overlaps may remain. For regenagri, significant overlaps exist—see footnote (5) on the next page.

4 Better Cotton, including equivalents, as reported by Better Cotton.

5 Please see further source information and footnotes in the organic cotton section.

6 The term certified includes various programs with different verification and chain of custody models.

Virgin cotton

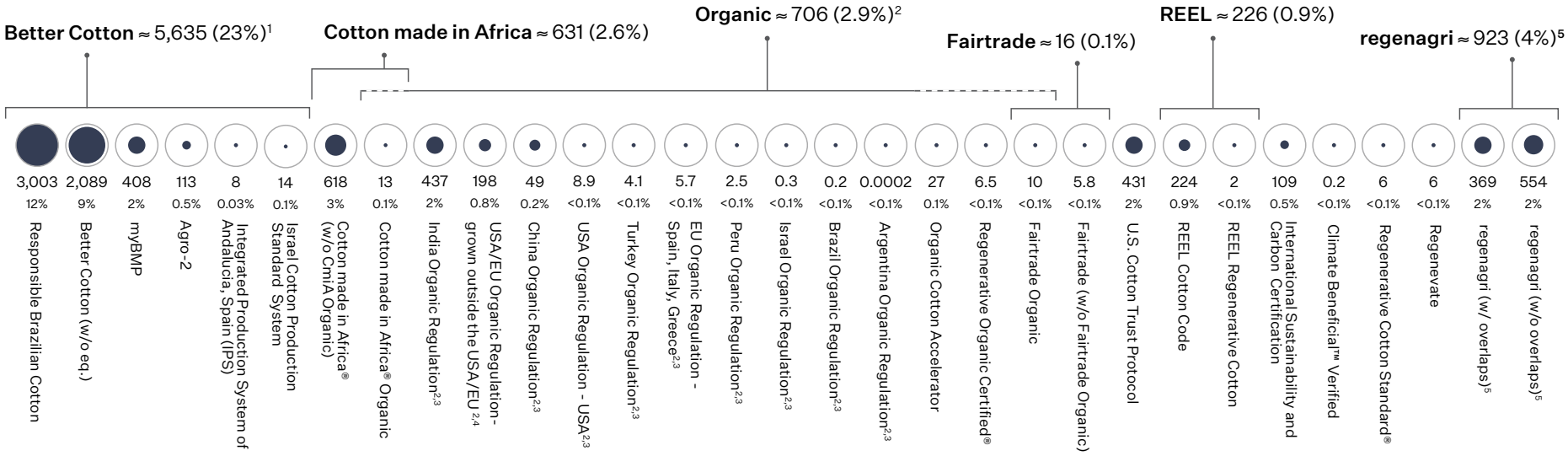
Cotton program overview

Global cotton fiber production by program in 2023/24 (thousand tonnes) and market share of total cotton (%)[6]

Total virgin cotton: 24.1 million tonnes

Covered by the programs below: 8.3 million tonnes (34%)

- - - Volumes listed for CmiA Organic, Regenerative Organic Certified, Organic Cotton Accelerator, and Fairtrade Organic are also included in the volumes listed for the respective national organic regulation(s) and/or in the category labeled 'USA/EU Organic Regulation-grown outside the USA/EU' but have not been double-counted in aggregated totals.



1 Better Cotton, including equivalents, as reported by Better Cotton.

2 Please see further source information and footnotes in the organic cotton section.

3 Includes cotton also certified to the EU Organic Regulation and/or USA Organic Regulation and/or any other programs such as ROC, OCA, or supplier-specific programs such as bioRe®.

4 Includes cotton certified to the USA Organic Regulation and/or the EU Organic Regulation grown outside of the USA/EU, respectively, but excludes cotton that is also certified to a national standard, as this is listed separately.

5 Significant overlaps exist between regenagri and other cotton programs. Precise overlap data isn't available, but it is estimated that around 40% (369,205 tonnes) of total regenagri cotton (923,013 tonnes) overlaps with other cotton programs. This 40% has been excluded when calculating the market share of virgin cotton covered by the programs that shared data for this report.

6 The following programs have been added to the global cotton fiber production by program chart this year: regenagri, Regenerative Cotton Standard®, Integrated Production System of Andalucía, Spain (IPS), Organic Cotton Accelerator, and Regenerative Organic Certified®. e3® Sustainable Cotton has been removed as it has been discontinued.

Virgin cotton

A closer look at the cotton programs

Agro-2 cotton production, recognized as equivalent to the Better Cotton Standard System since 2020, increased from 92,911 tonnes in 2022/23 to 112,995 tonnes in 2023/24. Agro-2 accounted for 56% of cotton grown in Greece and 0.5% of cotton grown worldwide.

Better Cotton (including equivalents) represented around 23% of all cotton produced worldwide in 2023/24, with global production increasing from 5.5 million tonnes in 2022/23 to 5.6 million tonnes in 2023/24. Better Cotton without its equivalents made up around 37% of all Better Cotton produced in 2023/24. The remaining 63% was produced according to the Better Cotton equivalents Agro-2, IPS, ICPSS, myBMP, and ABR.

Cleaner Cotton production was discontinued in March 2020 when the funding for the regular farm program ended. We still include Cleaner Cotton in historical data. The last year of production was 2019/20, when 878 tonnes of Cleaner Cotton were produced.

Climate Beneficial™ Verified[1] cotton production decreased from 394 tonnes in 2022/23 to 203 tonnes in 2023/24. All Climate Beneficial™ Verified cotton was produced in the United States, where it accounted for 0.01% of total US cotton production.

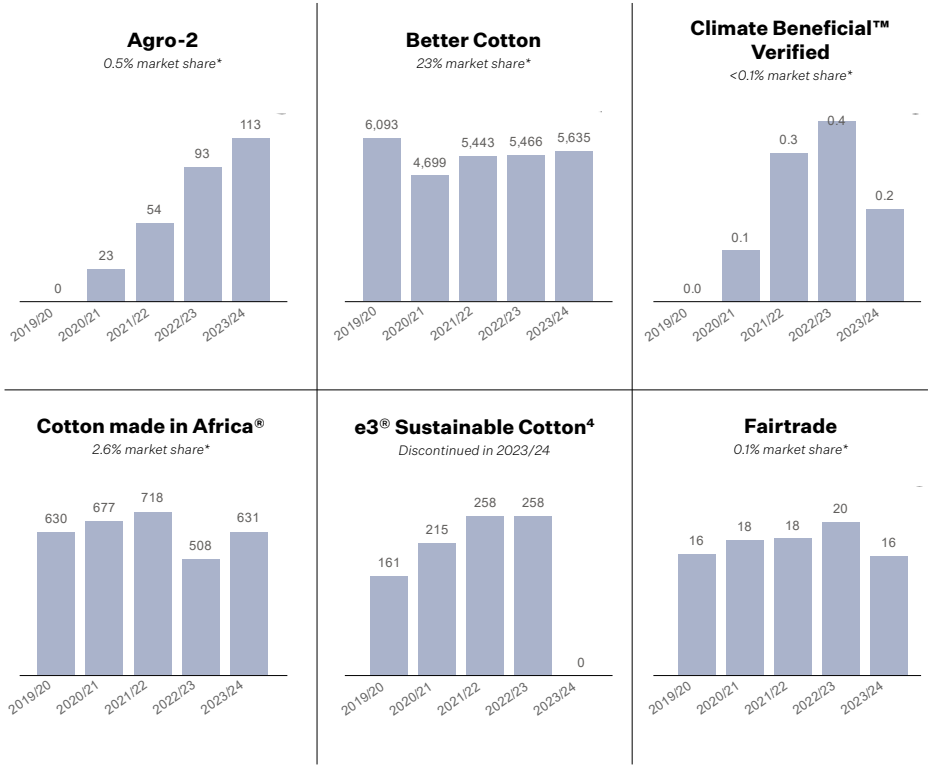
Cotton made in Africa® (CmiA) production increased from 508,145 tonnes in 2022/23 to 630,568 tonnes in 2023/24. CmiA accounted for 3% of all cotton produced globally in 2023/24, and around 33% of all cotton produced in Africa. The equivalency between CmiA and Better Cotton ended in 2022, meaning 2023/24 production was no longer covered by the equivalency.[2] In Tanzania and Benin, some CmiA cotton production was also certified to an organic standard—11,303 tonnes in Tanzania and 1,289 tonnes in Benin.

e3® Sustainable Cotton production has been discontinued and there was no certified production in 2023/24. We still include the chart with previous years' production in this report since it is part of historical data.

Fairtrade cotton production decreased from 20,414 tonnes in 2022/23 to 15,962 tonnes in 2023/24, accounting for 0.1% of all cotton produced worldwide. Approximately 64% (10,177 tonnes) of Fairtrade cotton was also certified to an organic standard.

The Integrated Production System of Andalucía, Spain (IPS)—known as Sistema de Producción Integrada (SPI) in Spanish—became recognized as equivalent to the Better Cotton Standard System in 2023. Andalucía is Spain's main cotton-producing region, and, in 2023/24, 7,785 tonnes of cotton fiber were produced on IPS-licensed farms.

Global cotton fiber production by program (thousand tonnes)[3]



* Market shares refer to the estimated percent of global virgin cotton production covered by the program in 2023/24.

1 The Climate Beneficial™ Fiber Program has changed its name to the Climate Beneficial™ Verified (CBV) program. In 2024/25, producer enrolment began for a new program called Climate Beneficial™ Verified-Transitional (CBV-T).

2 While the equivalency agreement between CmiA and the Better Cotton Standard System (BCSS) ended in 2022, certain volumes of CmiA cotton from validated countries in West Africa were sold as Better Cotton equivalent in 2023/24 under a quota agreement between AbTF and Better Cotton.

3 Production volumes by program include the total volume produced per program including equivalents and overlaps with other standards. Program data is based on information from program owners, received through email correspondence or from their websites. For Better Cotton equivalencies (Agro-2, IPS, ICPSS, myBMP, and ABR), production data is provided by Better Cotton.

4 e3® Sustainable Cotton production data was not available for 2022/23, so 2021/22 data was used as proxy for 2022/23. e3® Sustainable Cotton production has since been discontinued and there was no certified production in 2023/24.

Virgin cotton

A closer look at the cotton programs

International Sustainability and Carbon Certification (ISCC) cotton production resumed to levels seen in previous years after a significant, unexplained drop in 2022/23. In 2023/24, production was 108,736 tonnes, accounting for 0.5% of global cotton production. Most ISCC-certified cotton continued to be produced in Greece, with some production also in Kenya. The small volumes certified in Tanzania in 2022/23 did not resume in 2023/24.

The Israel Cotton Production Standard System (ICPSS)—a standard developed by the Israel Cotton Production and Marketing Board (ICB) in 2018—has been recognized as a Better Cotton equivalent since 2020. ICPSS production, which had increased significantly in 2022/23 to 17,303 tonnes, decreased to 14,217 tonnes in 2023/24. ICPSS accounted for 0.1% of all cotton produced worldwide, and 95% of all cotton grown in Israel in 2023/24.

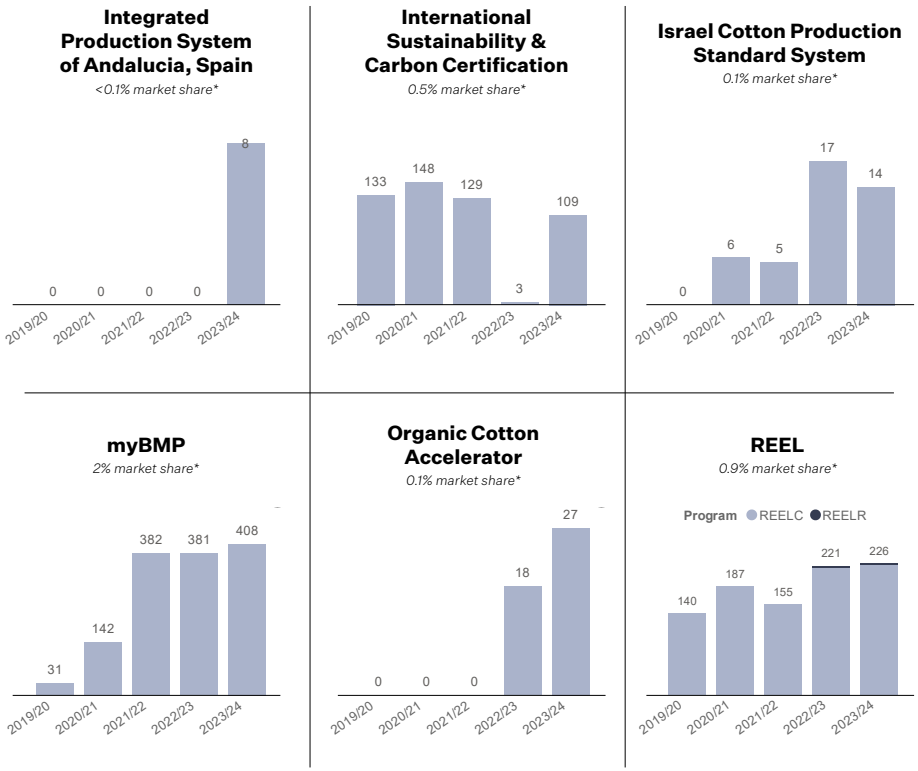
myBMP cotton production increased from 381,401 tonnes in 2022/23 to 407,659 tonnes in 2023/24, accounting for around 40% of all cotton grown in Australia and 2% of all cotton produced worldwide. Since 2014, myBMP has been recognized as a Better Cotton equivalent.

Organic Cotton Accelerator's (OCA) Farm Programme, which covers criteria beyond the current scope of the existing organic certification system, saw a significant increase in production, from 17,611 tonnes in 2022/23 to 26,987 tonnes in 2023/24. OCA's Farm Programme now accounts for 0.1% of cotton produced worldwide. The majority of 2023/24 production was grown in India (26,443 tonnes, accounting for 0.5% of India's total cotton production), with smaller volumes grown in Pakistan (544 tonnes, accounting for 0.04% of Pakistan's total cotton production). Pilots are also taking place in Turkey, with the first certified production from Turkey expected in 2024/25.

REEL Cotton Code[2] (REELC in the chart opposite) production increased from 219,443 tonnes in 2022/23 to 223,533 tonnes in 2023/24, now accounting for 0.9% of all cotton produced worldwide. Production took place in Turkey for the first time in 2023/24 and, while volumes in Bangladesh and China fell, production in India, Pakistan, and Egypt increased.

REEL Regenerative Code[2] (REELR in the chart opposite) was first piloted by CottonConnect in 2022/23, with production in India, Bangladesh, and Pakistan. Total production increased from 1,777 tonnes in 2022/23 to 2,066 tonnes in 2023/24.

Global cotton fiber production by program (thousand tonnes)[1]



* Market shares refer to the estimated percent of global virgin cotton production covered by the program in 2023/24.

1 Production volumes by program include the total volume produced per program including equivalents and overlaps with other standards. Program data is based on information from program owners, received through email correspondence or from their websites. For Better Cotton equivalents (Agro-2, IPS, ICPSS, myBMP, and ABR), production data is provided by Better Cotton.

2 In May 2025, CottonConnect released the REEL (Responsible Environment and Enhanced Livelihoods) Standards system, including the REEL Cotton Standard 1.0 and the REEL Regenerative Standard 1.0. The volumes included in this report cover 2023/24, before the launch of the REEL Standards system, and therefore still refer to the REEL Cotton Code and the REEL Regenerative Code.

Virgin cotton

A closer look at the cotton programs

regenagri is a regenerative agriculture program launched by Peterson and Control Union in 2020. In 2023/24, 923,013 tonnes of regenagri-certified cotton was estimated to have been produced across 13 countries, accounting for 4% of all cotton produced worldwide.[1] A significant proportion of this production is also certified to other cotton programs. While the precise overlap figure is not available, it is estimated to be around 40%.

Regenerative Cotton Standard® (RCS) was launched by the Aid by Trade Foundation in November 2023. In 2023/24, the first year of certification, 6,427 tonnes of RCS cotton was produced in Tanzania. Production is expected to expand to India in the future.

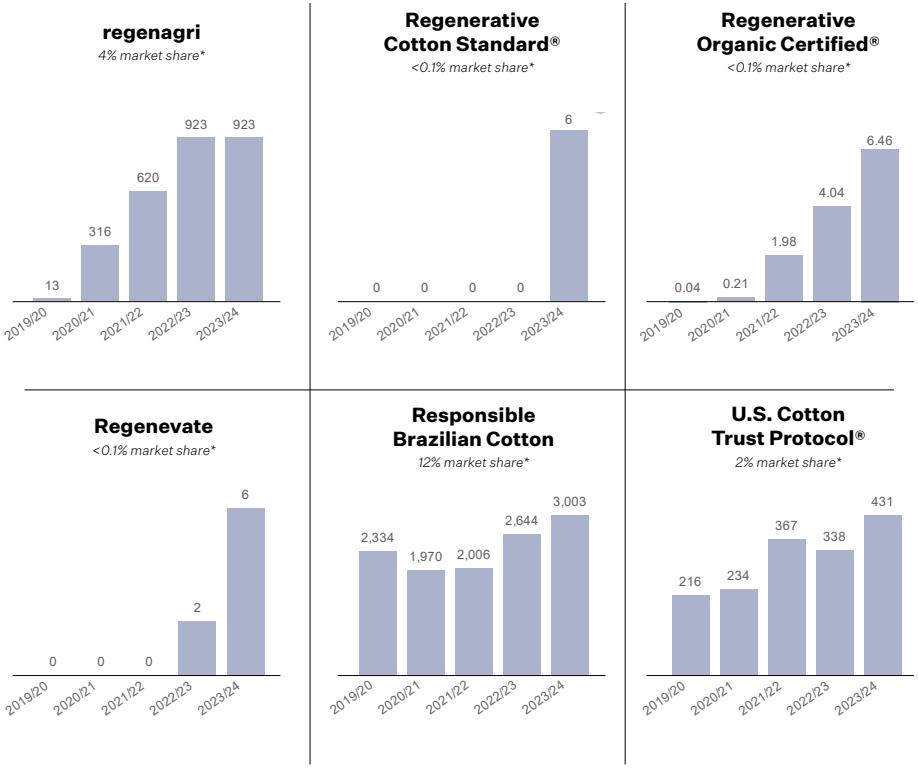
Regenerative Organic Certified® (ROC) cotton production increased from 4,041 tonnes in 2022/23 to 6,455 tonnes in 2023/24, now accounting for 0.03% of all cotton produced worldwide. This growth is attributed to new certified farms and the expansion of existing farms in India, where the majority (5,114 tonnes) of ROC cotton was produced in 2023/24. The remaining 1,341 tonnes were produced in Peru.

Regenevate is a program launched by USB Certification in Turkey in 2022. In 2023/24, its second season of operation, Regenevate produced 6,303 tonnes of certified cotton fiber, up from 2,067 tonnes in 2022/23. This accounted for 0.9% of all cotton grown in Turkey and 0.03% of all cotton grown worldwide in 2023/24.

Responsible Brazilian Cotton—The Brazilian Association of Cotton Producers (ABRAPA's Algodão Brasileiro Responsável (ABR)—saw production increase from 2.6 million in 2022/23 to around 3.0 million tonnes in 2023/24, accounting for 94% of cotton grown in Brazil and around 12% of all cotton grown worldwide.[2]

U.S. Cotton Trust Protocol® (USCTP) production increased from 338,188 tonnes in 2022/23 to 431,095 tonnes in 2023/24, a trend attributed to increased farmer participation. USCTP accounted for 16% of all cotton produced in the U.S. in 2023/24, and 2% of cotton produced worldwide. The environmental performance of USCTP cotton is measured and analyzed at the field level using Field to Market's Fieldprint Platform, and is verified by Control Union Certifications.

Global cotton fiber production by program (thousand tonnes)[3]



* Market shares refer to the estimated percent of global virgin cotton production covered by the program in 2023/24.

1 Data on 2023/24 regenagri production was not available at the time of reporting so 2022/23 data from regenagri's Impact Report 2023 was used as a proxy. Seed cotton volumes were converted to fiber volumes by applying national average ginning outturns as per ICAC's Cotton Production Data Portal.

2 While in general we align with ICAC's reporting year, in order to align with the global Better Cotton volumes for 2023/24 reported by Better Cotton, the volumes reported here for ABR cotton grown in Brazil are based on Brazil's National Supply Company's (CONAB) reporting cycle and cover cotton grown in the 2024 calendar year. However, total cotton figures for Brazil included in this report follow the approach taken by ICAC which (for Brazil only) has recently shifted to cover cotton grown in the 2023 calendar year. See methodology for more detail.

3 Production volumes by program include the total volume produced per program including equivalents and overlaps with other standards. Program data is based on information from program owners, received through email correspondence or from their websites. For Better Cotton equivalencies (Agro-2, IPS, ICPSS, myBMP, and ABR), production data is provided by Better Cotton.

Virgin cotton
Organic cotton

Certification of organic cotton production is a highly complex landscape, with 15 farm-level organic standards/ programs (different to organic chain of custody standards, which use these as inputs) known to be used for cotton in 2023/24.

Some of these farm-level standards/programs are specific to just one country, while others are used in many countries; some are governmental regulations, while others are private standards; and some have equivalency agreements with other standards, while others do not. In addition, aggregating organic cotton volumes at the global level is made particularly difficult by the fact that organic cotton is often certified to more than one standard, and not all standard owners publish data.

IFOAM-Organics International publishes a list of farm-level organic standards that it endorses in its IFOAM Family of Standards. In 2023/24, this list included 50 standards, nine of which were known to be used for the certification of cotton—eight governmental standards and one private standard. Three of the governmental standards—the India Organic Regulation, USA Organic Regulation, and EU Organic Regulation (which are often used in combination with each other or with other farm-level organic standards)—were estimated to account for around 92% of all certified organic cotton in 2023/24.

In addition to the nine organic standards endorsed by IFOAM-Organics International, there were another six organic standards/programs not included in the IFOAM Family of Standards but known to be used for cotton in 2023/24. These included the Brazil Organic Regulation (a governmental regulation also recognizing the Participatory Guarantee System), Peru Organic Regulation (a governmental regulation), Ecocert Organic Standard (a private standard), the Demeter Biodynamic Standard (a private standard), Regenerative Organic Certified®, and the Organic Cotton Accelerator.

Participatory Guarantee System (PGS) initiatives are not included in the IFOAM Family of Standards either, but are supported by IFOAM-Organics International as an alternative and complementary tool to third-party certification within the organic sector. PGS is used for cotton in Brazil (as part of Brazil Organic) and Thailand (as Thai PGS Organic Plus), although no volumes were certified in Thailand in 2023/24.

IFOAM Family of Standards: Governmental regulations

India Organic Regulation: The majority of organic cotton produced globally is estimated to have been grown in India and certified according to the India Organic Regulation, also known as India's National Programme of Organic Production (India-NPOP), as reported by India's Agricultural and Processed Food Products Export Development Authority (APEDA). Based on information reported by APEDA, it is estimated that 436,648 tonnes of cotton fiber were certified to the India Organic Regulation in 2023/24.[1] While all organic cotton grown in India is certified to the India Organic Regulation, most of it is also certified to the EU Organic Regulation and/or the USA Organic Regulation, and some is covered under non-governmental standards and programs such as Regenerative Organic Certified® or the Organic Cotton Accelerator.

USA Organic Regulation: Cotton certified to the USA Organic Regulation, also known as the United States National Organic Program (US-NOP), is not only grown in the United States but also in many other countries worldwide. In the United States, the United States Department for Agriculture (USDA) reported that 8,904 tonnes of organic cotton fiber were certified to the USA Organic Regulation in 2023/24.[2] Complete data for countries outside the United States certifying to US-NOP is not currently published by the USDA, so volumes have been estimated based on data from other sources (such as organic cotton producers, certification bodies, and gins). These estimates can be found in the chart on page 22, grouped with volumes certified to the EU Organic Regulation produced in non-EU countries.

EU Organic Regulation: Within the EU, cotton certified to the EU Organic Regulation was grown in Greece, Spain, and Italy in 2023/24. In **Greece**, based on data from the Ministry of Rural Development and Food (MDRF), an estimated 5,655 tonnes of cotton fiber were certified to the EU Organic Regulation in 2023/24.[3] In **Spain**, according to the Ministry of Agriculture, Fisheries and Food (MAPA), 25 tonnes of cotton fiber were certified to the EU Organic Regulation in 2023/24.[4] In **Italy**, the National Information System for Organic Farming (SINAB) established by the Ministry of Agriculture, Food and Forestry reported that 41 tonnes of cotton fiber were certified to the EU Organic Regulation in 2023/24.[5]

1 CRISIL Ltd. and India's Agricultural and Processed Food Products Export Development Authority (APEDA). *Study of Indian Organic Market and Export Promotion Strategy. August 2024*. **NOTE**: Cotton production volumes are reported as seed cotton and combine organic and in-conversion production together. Seed cotton volumes were converted to cotton fiber using India's average ginning outturn as per ICAC's Cotton Production Data Portal. Organic volumes were estimated by applying the average share of organic out of total organic and in-conversion cotton certified by APEDA from the previous three years.

2 United States Department for Agriculture (USDA). *Annual Organic Cotton Market Summary*. **NOTE**: USDA reports cotton volumes in bales. These were converted into tonnes using the Bale Shape and Size Annexure for 2023 from ICAC's Cotton Production Data Portal.

3 Greek Ministry of Rural Development & Food. *Statistics of Biological Products of Plant & Animal Origin*. **NOTE**: 2023/24 data was not available at the time of reporting, so 2022/23 data was used as a proxy.

4 Spain's Ministry of Agriculture, Fisheries and Food (MAPA). Organic Production.

5 Italy's National Information System for Organic Agriculture (SINAB). *Annual Report*. **NOTE**: SINAB only reports land area (hectares), so a yield estimate was used to convert this to fiber. The yield estimate applied was based on the assumption that organic cotton yields are, on average, 80% those of conventional cotton (Ponti et al., 2012. The crop yield gap between organic and conventional agriculture). Spain's conventional cotton yield as per ICAC was used as a proxy since yield data for Italy was unavailable. Please note that ICAC's Cotton Production Data Portal reported no cotton output from Italy in 2023/24. We are trying to better understand this discrepancy between ICAC and SINAB data.

Virgin cotton
Organic cotton

The EU Organic Regulation is also used to certify cotton in **many countries outside of Europe**, but the EU does not currently publish data on this. Therefore, volumes certified outside the EU to the EU Organic Regulation have been estimated based on data from other sources (such as organic cotton producers, certification bodies, and gins) and are included in the chart on page 22, grouped with volumes certified to the USA Organic Regulation grown outside the United States.

Argentina Organic Regulation: In Argentina, the Argentina Organic Regulation applies for the cultivation of organic cotton. The Ministry of Economy of Argentina publishes organic agriculture data, but does not provide a breakdown by cotton, so we report data from other sources, such as organic cotton producers and certification bodies. Based on this, it is estimated that 0.2 tonnes of cotton fiber were certified to the Argentina Organic Regulation in 2023/24.[1]

China Organic Regulation: Organic cotton sold on the domestic market in China must be certified to the China Organic Regulation (China National Organic Product Standard). Based on data from China's State Administration for Market Regulation (CNCA), it is estimated that 49,343 tonnes of organic cotton fiber were certified to the China Organic Regulation in 2023/24.[2] Organic cotton sold for export from China is often also certified to the EU Organic Regulation and/or USA Organic Regulation.

Turkey Organic Regulation: A relatively small share of the organic cotton fiber grown in Turkey is certified to its national standard, the Turkey Organic Regulation, with the Ministry of Agriculture and Forestry reporting 4,100 tonnes certified in 2023/24.[3] Most of Turkey's organic cotton is certified to the USA/EU Organic Regulation. Production volumes[4] for this are aggregated in the the chart on page 22, grouped with other volumes certified to the USA/EU Organic Regulation grown outside of the USA/EU.

Canada Organic Regulation: While cotton is not grown and certified to organic standards in Canada itself, the Canada Organic Regulation (COR) is sometimes used to certify cotton grown in other countries. It is often used in combination with national standards. For example, some of the cotton grown in India may be certified to both the India Organic Regulation and COR. Data on cotton volumes certified to COR were not available for 2023/24.

Israel Organic Regulation: In Israel, The Israel Cotton Board reports that 312 tonnes of cotton fiber were certified to the Israel Organic Regulation in 2023/24.[5] This figure includes cotton also certified to the USA/EU Organic Regulation.

IFOAM Family of Standards: Private standards

IBD organic guidelines: A relatively small share of the organic cotton fiber grown in Brazil is certified to the IBD organic guidelines. Most of Brazil's organic cotton is certified to the Brazil Organic Regulation.

Other (non-IFOAM) organic standards used for cotton

Brazil Organic Regulation: The Brazil Organic Regulation is a governmental regulation that also recognizes the PGS. Governmental data is not currently available, so we report data from other sources, such as organic cotton producers and certification bodies. Based on this, in 2023/24, an estimated 182 tonnes of cotton fiber were certified to the Brazil Organic Regulation. This figure includes cotton also certified to the USA/EU Organic Regulation.

Peru Organic Regulation: In Peru, the Ministry of Agrarian Development and Irrigation (MINAGRI) reports that 2,502 tonnes of cotton fiber were certified to the Peru Organic Regulation (a governmental regulation) in 2023/24.[6] This figure includes cotton also certified to the EU Organic Regulation and/or USA Organic Regulation and/or other standards such as Regenerative Organic Certified®.

Thai PGS Organic Plus: In Thailand, no organic cotton was certified in 2023/24. In previous years, organic cotton grown and harvested in Thailand has been certified to Thai PGS Organic Plus, a collaborative network of organizations in Thailand working on the PGS.

Demeter: Demeter is a biodynamic farm standard used to certify cotton in Egypt in combination with the USA/EU Organic Regulation. Specific volume data for Demeter-certified cotton was not available but is covered under the volumes reported for USA/EU Organic Regulation-certified cotton grown outside the USA/EU in the chart on the next page.

1 Data on cotton certified to the Argentina Organic Regulation was not available for 2022/23 or 2023/24, so 2021/22 data has been used as a proxy for these years.

2 China's State Administration for Market Regulation (CNCA). National certification and accreditation information public service platform. **NOTE**: CNCA did not publish production volumes for 2023/24, so a yield estimate was used to convert this to fiber. The yield estimate used was an average of the previous three years, when both production and land area data were provided by CNCA.

3 Turkish Ministry of Agriculture and Forestry. Crop Production—Statistics.

4 Data on organic cotton production certified to the USA/EU Organic Regulation in Turkey in 2022/23 and 2023/24 was estimated based on 2021/22 data shared by the Turkish Ministry of Agriculture and Forestry in a Presentation on Organic Cotton on February 17, 2022. The growth rate for total cotton production in Turkey calculated based on data from ICAC's Cotton Production Data Portal, was applied to the 2021/22 production data to estimate production volumes for 2022/23 and 2023/24.

5 The Israel Cotton Board Ltd. Email correspondence, March–April 2025.

6 Peru's Ministry of Agrarian Development and Irrigation. Organic and in-transition area statistics. **NOTE**: The Ministry only reports land area (hectares), so a yield estimate was used to convert this to fiber. The yield estimate applied was based on the assumption that organic cotton yields are, on average, 80% those of conventional cotton (Ponti et al., 2012. *The crop yield gap between organic and conventional agriculture*). Peru's conventional cotton yield was based on ICAC's Cotton Production Data Portal.

Virgin cotton
Organic cotton

Ecocert Organic Standard (EOS): EOS is a private standard implemented by ECOCERT SAS which had equivalence with the EU Organic Regulation in the 2023/24 harvest period. Specific volume data for EOS-certified cotton was not available at the time of reporting but is covered under the volumes reported for the EU Organic Regulation. Clients certified under EOS are currently in the process of transitioning to be certified under EU regulation 2018/848. Existing EOS certificates will remain valid until new certificates under EU regulation 2018/848 are issued, no later than October 15, 2025.

Regenerative Organic Certified® (ROC): ROC is an agricultural standard that builds on the USA Organic Regulation, meaning entities must first be certified to the USA Organic Regulation or a formally recognized international equivalent. See the previous ROC section for production data.

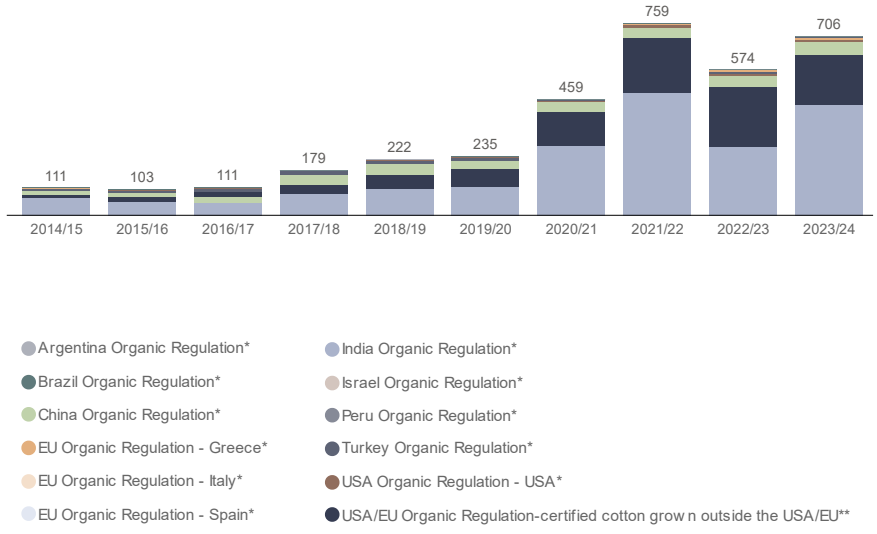
Organic Cotton Accelerator (OCA): OCA is not an organic standard but operates on top of the existing certification system, covering criteria beyond the current scope of organic certification via its Farm Programme. See the previous OCA section for production data.

Global estimate

Due to the complex landscape of organic certification, calculating organic cotton production volumes at the global level is extremely challenging. Organic cotton is often certified to multiple standards, complicating the aggregation process. Moreover, significant data gaps exist, necessitating the use of modeling and proxies in several countries. As a result, global data should be considered very rough estimates and should only be used as such.

The chart opposite includes data from each national or governmental organic standard/program where cotton production data was available at the time of reporting. Based on this, in 2023/24, approximately 706 thousand tonnes of cotton were estimated to have been certified to one or more of the 15 farm-level organic standards or programs known to be used for cotton production that year, representing 2.9% of global cotton production. This is an increase from the 574 thousand tonnes of cotton estimated to have been certified to one or more of the organic standards/programs known to be used for cotton in 2022/23, which accounted for 2.3% of total cotton production that year.

Organic cotton fiber production by program (thousand tonnes)



Source: Textile Exchange based on India's Agricultural and Processed Food Products Export Development Authority (APEDA), the United States Department of Agriculture (USDA), Greece's Ministry of Rural Development and Food (MRDF), Spain's Ministry of Agriculture, Fisheries and Food (MAPA), Italy's National Information System on Organic Farming (SINAB), China's National Certification and Accreditation Administration (CNCA), Turkey's Ministry of Agriculture and Forestry (MinAF) database and presentation, The Israel Cotton Board Ltd. (ICB), Peru's Ministry of Agriculture and Irrigation (MINAGRI), and other data sources such as The International Cotton Advisory Committee (ICAC), organic cotton producers, and certification bodies. For some countries, conversion factors were applied to calculate fiber volumes and/or proxies were used due to data for the latest year(s) not being available at the time of reporting. Please see the cotton section of Textile Exchange's 2025 Materials Market Report for more detail.

* Includes cotton volumes that are also certified to the EU Organic Regulation and/or USA Organic Regulation and/or any other programs such as Regenerative Organic Certified® (ROC), Organic Cotton Accelerator (OCA), or supplier-specific programs such as bioRe®.

** Includes cotton certified to the USA Organic Regulation and/or the EU Organic Regulation grown outside of the USA/EU, respectively, but excludes cotton that is also certified to a national standard as this is listed separately.

Virgin cotton
Evolution of cotton programs

Equivalency agreements[1]

The following programs are, or have been, recognized as equivalent to the Better Cotton Standard System (BCSS):

- Cotton made in Africa® (CmiA) between 2012 and 2022[2]
- Responsible Brazilian Cotton (ABR) since 2014
- myBMP since 2014
- Agro-2 since 2020
- The Israel Cotton Production Standard System (ICPSS) since 2020
- The Integrated Production System of Andalucía, Spain (IPS) since 2023

Discontinued cotton programs

Cleaner Cotton™ was discontinued in March 2020, when the funding for the regular farm program ended.

Field to Market continues to be used as a tool but it is no longer considered a standalone program. Most of the cotton that uses Field to Market's Fieldprint Platform to measure and analyze environmental performance on the field is also enrolled in the USCTP, as Field to Market enrollment is a condition of the USCTP. Cotton that is part of Field to Market but not part of the USCTP is not otherwise certified or verified.

e3® Sustainable Cotton program ceased being offered to the market by BASF in 2023/24.

1 Not including equivalency agreements with organic certification.

2 While the equivalency agreement between CmiA and the Better Cotton Standard System (BCSS) ended in 2022, certain volumes of CmiA cotton from validated countries in West Africa were sold as Better Cotton equivalent in 2023/24 under a quota agreement between AbTF and Better Cotton.

Cotton programs timeline

1996	*IFOAM–Organics International set first international organic standard*
	Sustainable Cotton Project/Cleaner Cotton™ founded
1997	*MyBMP founded*
2004	*Fairtrade standard for seed cotton established*
2005	*Better Cotton founded*
	Cotton made in Africa® (CmiA) established
2009	*ABRAPA's Responsible Brazilian Cotton (ABR) program started*
2010	*CottonConnect's REEL cotton program started*
	International Sustainability and Carbon Certification (ISCC) started
2012	*CmiA became recognized as equivalent to the Better Cotton Standard System (BCSS)*
2013	*Bayer CropScience launched e3® Sustainable Cotton program (later moved under BASF)*
	Field to Market launched
2014	*myBMP recognized as equivalent to the BCSS*
	ABR recognized as equivalent to the BCSS
2015	*REEL Cotton Code was developed*
	Climate Beneficial™ Verification program launched
2016	*Organic Cotton Accelerator was established*
2018	*Regenerative Organic Certified® launched*
2019	*U.S. Cotton Trust Protocol launched*
2020	*Climate Beneficial™ cotton first grown*
	Agro-2 became recognized as equivalent to the BCSS
	Israel Cotton Production Standard System (ICPSS) recognized as equivalent to the BCSS
	Cleaner Cotton discontinued
	QAI Transitional program discontinued
	regenagri launched
2021	*CottonConnect introduced the REEL Regenerative Code*
	Field to Market no longer considered a standalone program
2022	*CmiA and BCSS equivalency agreement ends*
	Regenevate launched
	Regenerative Cotton Standard® launched
	The Integrated Production System of Andalucía, Spain (IPS) recognized as equivalent to the BCSS
2024	*e3® Sustainable Cotton program discontinued*

Virgin cotton

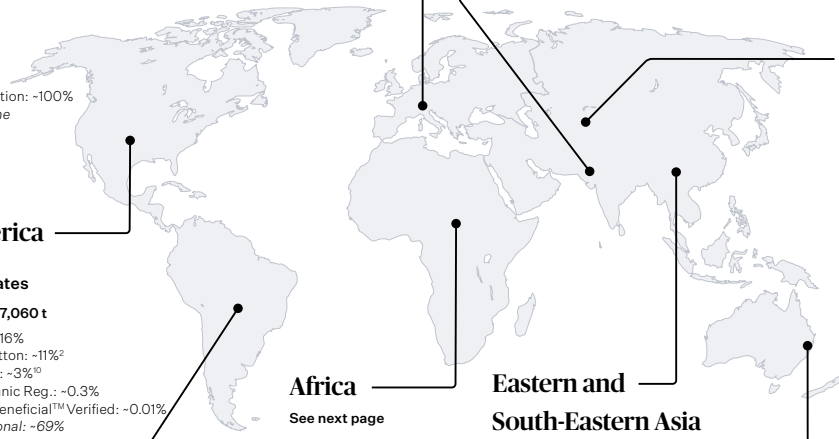
Where to find cotton programs across the globe[1]

Legend:

- Total cotton > 1 million t
- Total cotton > 300,000 t
- Total cotton > 100,000 t
- Total cotton < 100,000 t
- ● Cotton programs (%)
- ○ *Conventional cotton (%)*

This chart lists only countries where cotton is produced according to one of the listed cotton programs.

Big cotton producing countries (>100,000t) with no cotton covered by the programs include Turkmenistan, Myanmar, and Sudan.



Southern Europe

Greece — 99%
Total: ~200,000 t
- ● AGRO2: ~56%
- ● ISCC: ~40%
- ● EU Organic Regulation: ~3%
- ○ *Conventional: ~1%*

Spain — 54%
Total: ~ 21,000 t
- ● IPS: ~37%
- ● regenagri: ~16%[10]
- ● EU Organic Regulation: ~0.1%
- ○ *Conventional: ~46%*

Italy — 100%
Total: ~0 t[5]
- ● EU Organic Regulation: ~100%
- ○ *Conventional: ~none*

Northern America

United States — 31%
Total: ~2,627,060 t
- ● USCTP: ~16%
- ● Better Cotton: ~11%[2]
- ● regenagri: ~3%[10]
- ● USA Organic Reg.: ~0.3%
- ● Climate Beneficial™ Verified: ~0.01%
- ○ *Conventional: ~69%*

Latin America and the Caribbean

Brazil — 98%
Total: ~3,200,000 t
- ● ABR: ~94%
- ● regenagri: ~4%[10]
- ● Brazil Organic: ~0.01%[6,7]
- ○ *Conventional: ~2%*

Peru — 23%
Total: ~19,540 t
- ● Peru Organic: ~13%[6]
- ● regenagri: ~10%[10]
- ○ *Conventional: ~77%*

Mexico — 11%
Total: ~234,980 t
- ● regenagri: ~11%
- ○ *Conventional: ~89%*

Argentina — 0.0001%
Total: ~310,000 t
- ● Argentina Organic Regulation: ~0.0001%
- ○ *Conventional: ~99.9999%*

Africa

See next page

Southern Asia

Bangladesh — 10%
Total: ~33,000 t
- ● REEL Cotton: ~9%
- ● REEL Regenerative: ~1%
- ○ *Conventional: ~90%*

India — 31%
Total: ~5,492,870 t
- ● Better Cotton: ~17%[2]
- ● India Organic Reg.: ~8%[6,9]
- ● REEL Cotton: ~3%
- ● regenagri: ~2%[10]
- ● Fairtrade (inc. Fairtrade-organic): ~0.2%[4]
- ● REEL Regenerative: ~0.02%
- ○ *Conventional: ~69%*

Pakistan — 36%
Total: ~1,420,000 t
- ● Better Cotton: ~33%[2]
- ● USA/EU Organic Reg.: ~2%[8]
- ● REEL Cotton: ~2%
- ● regenagri: ~0.1%[10]
- ● REEL Regenerative: ~0.1%
- ○ *Conventional: ~64%*

Eastern and South-Eastern Asia

China — 2%
Total: ~5,600,000 t
- ● Better Cotton: ~2%[2]
- ● China Organic Regulation: ~0.9%[6]
- ● REEL Cotton: ~0.03%
- ○ *Conventional: ~98%*

Western and Central Asia

Israel — 97%
Total: ~14,980 t
- ● ICPSS: ~95%
- ● Israel Organic Regulation: ~2%[6]
- ○ *Conventional: ~3%*

Kyrgyzstan — 124%[5]
Total: ~ 16,000 t
- ● USA/EU Organic Reg.: ~124%[5,8]
- ● Fairtrade: undisclosed[3]
- ○ *Conventional: ~none*

Turkey — 31%
Total: ~700,000 t
- ● Better Cotton: ~14%[2]
- ● USA/EU Organic Reg.: ~9%[8]
- ● regenagri: ~5%[10]
- ● Regenevate: ~1%
- ● REEL Cotton: ~1%
- ● Turkey Organic Regulation: ~0.6%[6]
- ○ *Conventional: ~69%*

Tajikistan — 40%
Total: ~109,470 t
- ● Better Cotton: ~19%[2]
- ● USA/EU Organic Reg.: ~17%[8]
- ● regenagri: ~4%[10]
- ● Fairtrade: undisclosed[3]
- ○ *Conventional: ~60%*

Uzbekistan — 6%
Total: ~590,000 t
- ● Better Cotton: ~3%[2]
- ● USA/EU Organic Reg.: ~2%[8]
- ○ *Conventional: ~94%*

Azerbaijan — 10%
Total: ~ 100,000 t
- ● USA/EU Organic Reg.: ~10%[8]
- ○ *Conventional: ~90%*

Australia and New Zealand

Australia — 50%
Total: ~1,021,000 t
- ● MyBMP: ~40%
- ● regenagri: ~10%[10]
- ○ *Conventional: ~50%*

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1 Cotton program-specific data was collected from the programs and is reported in this map as a share (%) of the country's total global cotton production volume in 2023/24. Total cotton production data is from ICAC (ICAC, 2025. World Cotton Statistics. Downloaded May 12, 2025). Conventional cotton volumes are calculated by Textile Exchange. Volumes are reported in metric tonnes (t). Recycled cotton is not included in this map.

2 Better Cotton refers here to Better Cotton excluding equivalents. Better Cotton equivalents are listed separately.

3 Fairtrade data is not always disclosed on a per-country basis for confidentiality reasons. In these cases, the percentage listed for the country's total cotton that is covered by cotton programs does not include Fairtrade cotton and is thus actually slightly higher.

4 The total Fairtrade cotton production in India was 11,553 tonnes in 2023/24, including around 8,792 tonnes of Fairtrade organic.

5 The percentage of a country's total cotton that is covered by the listed cotton programs is derived from the difference between the aggregated cotton volumes of these programs in that country (as shared by the respective program owners) and the overall cotton production of that country as reported by ICAC. For some countries, there is a discrepancy between the two that results in figures above 100%. Both ICAC and Textile Exchange rely on secondary data, and there are sometimes discrepancies between the data sources used. Sometimes, a country's total cotton production as reported by ICAC, USDA, and national governments can differ. We are trying our best to understand more about these discrepancies. You can learn more about Textile Exchange's data collection methodology here, and about the sources of ICAC's cotton statistics here.

6 This includes cotton volumes that are also certified to the EU Organic Regulation and/or USA Organic Regulation and/or any other programs such as Regenerative Organic Certification® (ROC), the Organic Cotton Accelerator (OCA), or supplier-specific programs such as bioRe®.

7 Brazil Organic is not part of the IFOAM Family of Standards and is not a governmental standard.

8 USA/EU Organic Reg refers to cotton certified to the USA Organic Regulation and/or the EU Organic Regulation grown outside of the USA/EU, respectively. It excludes cotton that is also certified to a national standard as this is listed separately.

9 Some India Organic Regulation-certified cotton is also certified to the Canada Organic Regime (COR).

10 regenagri percentages in this chart exclude overlaps with other cotton programs (for countries where other cotton programs are listed) based on the global estimation that 40% of total regenagri production is also certified to other cotton programs.

Virgin cotton

Where to find cotton programs across the globe[1]

Legend:

- Total cotton > 1 million t
- Total cotton > 300,000 t
- Total cotton > 100,000 t
- Total cotton < 100,000 t
- ● Cotton programs (%)
- ○ *Conventional cotton (%)*

This chart lists only countries where cotton is produced according to one of the listed cotton programs.

Big cotton producing countries (>100,000t) with no cotton covered by the programs include Turkmenistan, Myanmar, and Sudan.

Sub-Saharan Africa

Benin
33%[2]
Total: ~220,000 t
- ● CmiA (inc. CmiA Organic): ~33%
- ● USA/EU Organic Reg.: ~0.6%[3]
- ○ *Conventional: ~67%*

Burkina Faso
91%
Total: ~170,000 t
- ● CmiA: ~91%
- ● USA/EU Organic Reg.: ~0.2%[3]
- ● Fairtrade: undisclosed[7]
- ○ *Conventional: ~9%*

Cameroon
115%[4]
Total: ~140,000 t
- ● CmiA: ~115%[4]
- ○ *Conventional: ~none*

Côte d'Ivoire
112%[4]
Total: ~150,000 t
- ● CmiA: ~99%
- ● regenagri: ~13%[5]
- ● USA/EU Organic Reg.: ~0.02%[3]
- ○ *Conventional: ~none*

Ethiopia
0.1%
Total: ~ 63,320 t
- ● USA/EU Organic Reg.: ~0.1%[3]
- ○ *Conventional: ~99.9%*

Kenya
2,903%[4]
Total: ~ 1,000 t
- ● ISCC: ~2,903%[4]
- ○ *Conventional: ~none*

Mali
59%
Total: ~280,000 t
- ● Better Cotton: ~59%[6]
- ● USA/EU Organic Reg.: ~0.01%[3]
- ○ *Conventional: ~41%*

Mozambique
47%
Total: ~22,940 t
- ● Better Cotton: ~30%[6]
- ● CmiA: ~17%
- ○ *Conventional: ~53%*

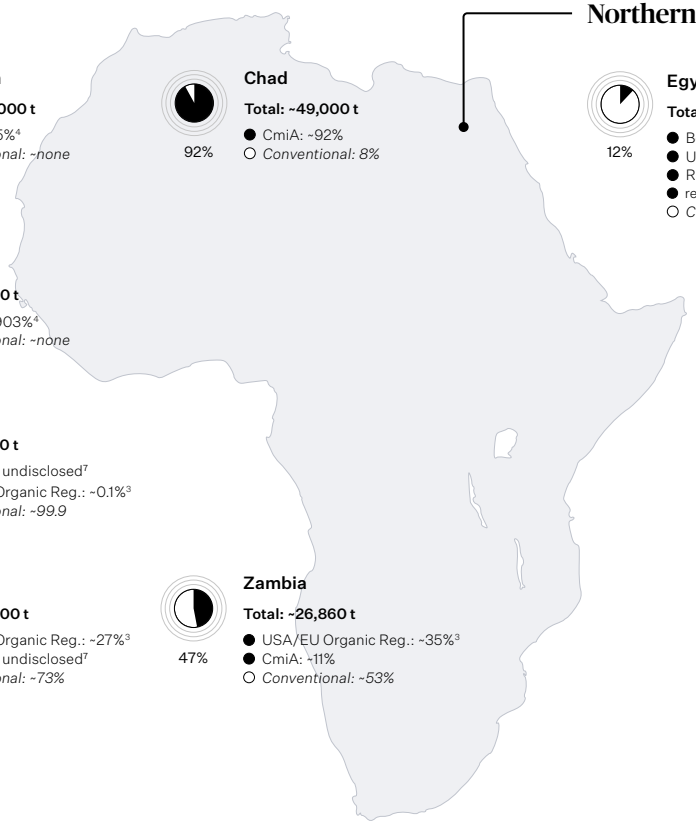
Senegal
0.1%
Total: ~9,900 t
- ● Fairtrade: undisclosed[7]
- ● USA/EU Organic Reg.: ~0.1%[3]
- ○ *Conventional: ~99.9*

Tanzania
45%[2]
Total: ~141,460 t
- ● regenagri: ~22%[5]
- ● USA/EU Organic Reg.: ~17%[3]
- ● CmiA (inc. CmiA organic): ~9%
- ● Regenerative Cotton Standard®: ~5%
- ○ *Conventional: ~55%*

Togo
104%[4]
Total: ~28,000 t
- ● CmiA: ~104%[4]
- ○ *Conventional: ~none*

Uganda
27%
Total: ~44,600 t
- ● USA/EU Organic Reg.: ~27%[3]
- ● Fairtrade: undisclosed[7]
- ○ *Conventional: ~73%*

Zambia
47%
Total: ~26,860 t
- ● USA/EU Organic Reg.: ~35%[3]
- ● CmiA: ~11%
- ○ *Conventional: ~53%*



Northern Africa

Chad
92%
Total: ~49,000 t
- ● CmiA: ~92%
- ○ *Conventional: 8%*

Egypt
12%
Total: ~69,300 t
- ● Better Cotton: ~11%[6]
- ● USA/EU Organic Reg.: ~0.5%[3,8]
- ● REEL Cotton: ~0.3%
- ● regenagri: ~0.2%[5]
- ○ *Conventional: ~88%*

1 Cotton program-specific data was collected from the programs and are reported in this map as a share (%) of the country's total global cotton production volume in 2023/24. Total cotton production data is from ICAC (ICAC, 2025. World Cotton Statistics. Downloaded May 12, 2025). Conventional cotton volumes are calculated by Textile Exchange. Volumes are reported in metric tonnes (t). Recycled cotton is not included in this map.

2 CmiA organic production volumes are included under both CmiA organic and USA/EU Organic Regulation in this map but have only been counted once in this figure showing the percentage of the country's total cotton that is covered by the cotton programs that shared data for this report.

3 USA/EU Organic Reg refers to cotton certified to the USA Organic Regulation and/or the EU Organic Regulation grown outside of the USA/ EU, respectively. It excludes cotton that is also certified to a national standard as this is listed separately.

4 The percentage of a country's total cotton that is covered by the listed cotton programs is derived from the difference between the aggregated cotton volumes of these programs in that country (as shared by the respective program owners) and the overall cotton production of that country as reported by ICAC. For some countries, there is a discrepancy between the two that results in figures above 100%. Both ICAC and Textile Exchange rely on secondary data, and there are sometimes discrepancies between the data sources used. Sometimes, a country's total cotton production as reported by ICAC, USDA, and national governments can differ. We are trying our best to understand more about these discrepancies. You can learn more about Textile Exchange's data collection methodology here, and about the sources of ICAC's cotton statistics here.

5 regenagri percentages in this chart exclude overlaps with other cotton programs (for countries where other cotton programs are listed) based on the global estimation that 40% of total regenagri production is also certified to other cotton programs.

6 Better Cotton refers here to Better Cotton excluding equivalents. Better Cotton equivalents are listed separately.

7 Fairtrade data is not always disclosed on a per-country level for confidentiality reasons. In these cases, the percentage listed for the country's total cotton that is covered by cotton programs does not include Fairtrade cotton and is thus actually slightly higher.

8 Includes Demeter-certified cotton.

Recycled cotton
Market overview

Recycled cotton had an estimated production volume of 0.3 million tonnes in 2024 (compared to 24.1 million tonnes of virgin cotton), giving it a market share of approximately 1% of total cotton production.[1]

An analysis by the Circular Fashion Partnership, a cross-sectoral initiative to support the development of effective circular fashion systems, revealed in its *Scaling Circularity Report* the significant value of utilizing textile waste more efficiently. It highlighted research by Reverse Resources that found that Bangladesh alone produces approximately 330,000 tonnes of 100% pure pre-consumer cotton waste in its ready-made garment (RMG) and fabric mills per year, out of which only 5-7% is currently recycled.[2]

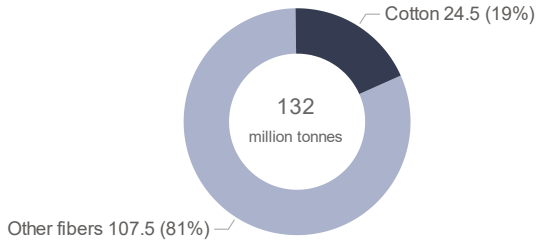
Please note that the data presented here refers to mechanically recycled cotton. Chemically recycled cotton is covered in the chapter on manmade cellulosic fibers since the result is a manmade cellulosic fiber, not cotton.

Key standards

Textile Exchange's Global Recycled Standard (GRS) and Recycled Claim Standard (RCS) are key third-party standards used for recycled cotton.[3]

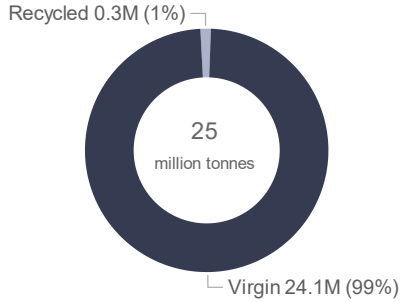
Photo: Anass Ouaziz

Global market share of cotton in 2024 (million tonnes)



Source: Textile Exchange based on ICAC and other sources.
NOTE: Includes recycled cotton.

Recycled cotton's market share of global cotton production in 2024 (million tonnes)



Source: Textile Exchange based on ICAC and Maia Research.

1 Calculated by Textile Exchange based on the following sources:

i. ICAC, 2025. World Cotton Statistics. Downloaded May 12, 2025. **NOTE**: For the virgin cotton production volume in 2024, ICAC harvest year data from the 2023/24 season has been applied.

ii. Maia Research, 2025. *Global Recycled Cotton Market Report 2025.* Commissioned report.

2 McKinsey & Company and Global Fashion Agenda, 2021. *Scaling Circularity Report*.

3 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

The global fiber market

Other plant-based fibers

Other plant-based fibers
Global overview

Besides cotton, there is a diversity of other plant-based fibers such as jute, coir, flax, hemp, sisal, abaca, kapok, ramie, and agave.[1] It is estimated that more than eight million households are involved in the production of these natural, non-cotton, plant-based fibers.[2]

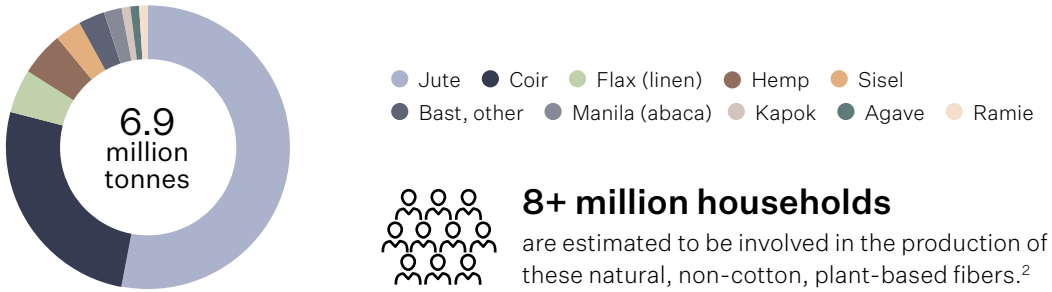
With a global production volume of around 6.9 million tonnes, these non-cotton, plant-based fibers had a combined market share of approximately 6% of global fiber production in 2024.[3]

Jute had the largest market share of all non-cotton, plant-based fibers in 2024, accounting for around 54%.[4] Similar to hemp, flax, and ramie, jute is a bast fiber derived from the strands surrounding the hurd, or woody core, of the stem. It is used to make twine, rope, matting, packaging material, and home textiles.

Coir had the second-largest market share, accounting for approximately 26% of all non-cotton, plant-based fiber produced in 2024.[4] Coir is fiber extracted from the husks of coconuts and is used to produce home textiles such as floor mats, doormats, brushes, and mattresses.

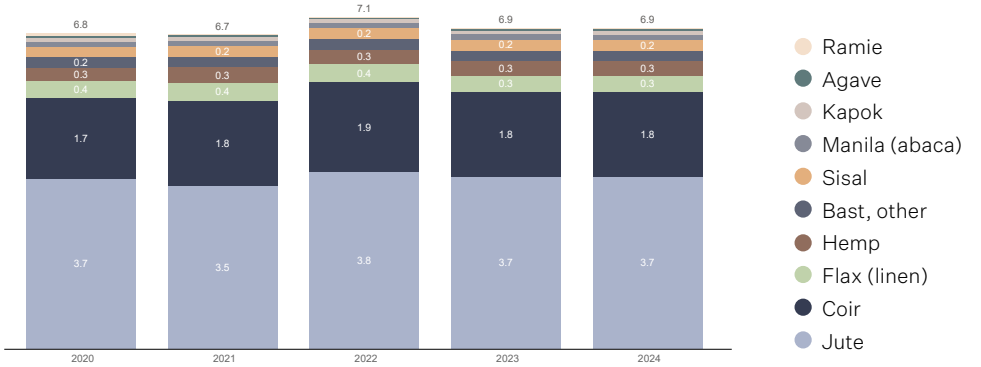
Flax fiber production data is not easily accessible at a global level, but it is estimated that around 0.3 million tonnes were produced worldwide in 2024, including short and long staple fibers.[5] This means that flax accounted for around 5% of the non-cotton, plant-based fiber market and 0.3% of the global fiber market in 2024.[3] Processed flax, or linen, is used for various products including home textiles and apparel. Around 70% of the flax used for fiber in 2024 was grown in Europe, with France being the largest producer. European flax is cultivated in a broad coastal band stretching from northern France through Belgium and the Netherlands. Other key flax fiber-producing countries are Belarus, Russia, Ukraine, and China.[5]

Global "other" (non-cotton) plant-based fiber production in 2024[3]



Source: Textile Exchange based on FAOSTAT and The Alliance for European Flax-Linen & Hemp data.

Global "other" (non-cotton) plant-based fiber production (million tonnes)



Source: Textile Exchange based on Alliance for European Flax-Linen & Hemp and FAOSTAT.

1 For FAO's fiber definitions, use the FAOSTAT query tool (select definitions and standards then item, and type the fiber name).

2 DNFI, 2020. Press release *40 Million Households Produce Natural Fibres* published on 20 April 2020.

3 Textile Exchange based on FAOSTAT, Alliance for European Flax-Linen & Hemp, and total global production volumes compiled by Textile Exchange (see global fiber market).

4 Textile Exchange based on FAOSTAT. 2023 data, the latest available, is used as a proxy for 2024. Please note that the data quality of these other plant-based fibers is limited. Data adjustments are regularly made for historical data and data gaps exist for some countries.

5 Textile Exchange flax data and information are based on Alliance for European Flax-Linen & Hemp (email correspondence, March 2025).

Other plant-based fibers
Global overview

European Flax™ is the Alliance for European Flax-Linen and Hemp's traceability standard for flax fiber grown in Europe. The revised European Flax™ Standard Version 3.1 was released on October 22, 2024, and took effect January 1, 2025. In 2025, the certification name is changing from European Flax™ to Masters of FLAX FIBRE™. Masters of LINEN™ is the Alliance's registered trademark, indicating linen that is 100% made by European companies, from field to fabric.

Organic flax—grown according to one of the IFOAM Family of Standards—is produced at a very small scale.

CottonConnect is piloting the REEL Linen Code of Conduct, which builds on the REEL Cotton Code. The REEL Linen Code consists of two parts: farming and processing (scutching and spinning). It outlines practices in management, social, and environmental areas.

Hemp fiber production data is not easily accessible at a global level. With an estimated 0.3 million tonnes of fiber hemp grown worldwide in 2024, hemp accounts for around 5% of the non-cotton, plant-based fiber market, or around 0.2% of the global fiber market.[1] A bast fiber, hemp is used in various industries including home textiles and apparel.

Hemp production is not yet legal worldwide, but governments are increasingly authorizing farmers to grow the crop. According to data from the Food and Agriculture Organization Corporate Statistical Database (FAOSTAT), 20 countries grew fiber hemp in 2024: Australia, Austria, Chile, China, Czechia, Democratic People's Republic of Korea (North), France, Greece, Italy, Japan, Lithuania, the Netherlands, People's Republic of Korea (South), Poland, Romania, Russian Federation, Spain, Turkey, Ukraine, and the United States. France accounted for over a third of global hemp fiber production in 2024, followed by China, the United States, Democratic People's Republic of Korea (North), Netherlands, and Australia.[1]

The Responsible Hemp Standard (RHS), developed by INCCert, is a global chain-of-custody certification program that includes farm-level certification and provides apparel brands and textile mills with a framework to source hemp fiber. RHS is currently being implemented in Europe and North America. Launched in late 2024, there are certified operators in Peru, France, Turkey, and the United States.

For more information about hemp fiber, please read Textile Exchange's 2023 report *Growing Hemp for the Future*.

Research into hemp and jute as feedstock for composite materials and manmade cellulosic fibers (MMCFs) is currently underway. See the manmade cellulosic fibers chapter for more information.

Nettle, kapok, lotus, and other plant-based fibers are also receiving increasing interest from the apparel and textiles industry, as well as fibers from agricultural residues such as rice straw, pineapple leaves, banana tree trunks, and sugar cane bark. If these plants are dissolved into pulp, they are listed in the chapter on manmade cellulosic fibers. If polymerization is used to process them, they are listed as Biosynthetics.

Photo: Joya Berrow

1 Textile Exchange based on FAOSTAT and total global production volumes compiled by Textile Exchange (see global fiber market). 2024 data was not available at the time of reporting, and 2023 data has therefore been used as a proxy.

The global fiber market

Wool

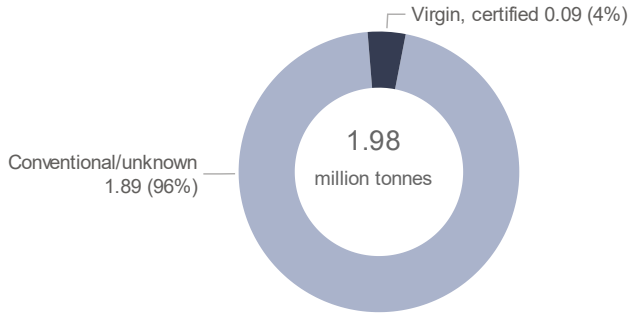
Virgin sheep wool
Production facts and figures

With an annual production volume of approximately 1 million tonnes of clean wool fiber, or 1.98 million tonnes of greasy wool fiber, sheep wool is the most widely used animal-based fiber.[1]

Wool produced according to the Responsible Wool Standard (RWS), ZQ, ZQ Regenerative Index (ZQRX), SustainaWOOL Green (SustainaWOOL under the Australian Wool Sustainability Scheme (AWSS)), Sustainablue (ResponsiWOOL under AWSS), SustainaWOOL Gold (no longer offered under AWSS),[3] Sustainable Cape Wool Standard (SCWS), and Climate Beneficial™ Verified decreased from an estimated 102,663 tonnes (~5.2% of total greasy wool production) in 2023 to 86,002 tonnes (~4.3%) in 2024.

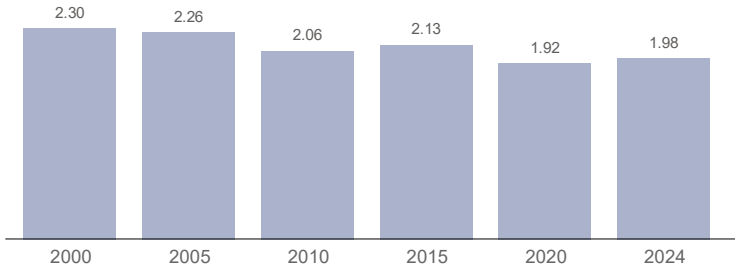
The RWS (including equivalents) accounted for approximately 82% of this 4.3% market share in 2024, accounting for 3.6% of the global greasy wool market. ZQ (including equivalents) accounted for 0.8%, SCWS farm audit for 0.2% (with a further 0.4% being certified under both RWS and the SCWS shearing module), Sustainablue (ResponsiWOOL under AWSS) for 0.4%, SustainaWOOL Green (SustainaWOOL under AWSS) for 0.2%, SustainaWOOL Gold for 0.02%, and Climate Beneficial™ Verified for 0.003%. Due to the double certification of around 1.2% of global greasy wool production, 4.3% (and not 5.5%) was certified according to these programs.

Global wool programs' greasy wool market share in 2024[2]



Source: Textile Exchange based on IWTO and program owners.

Global greasy wool fiber production (million tonnes)



Source: Textile Exchange based on IWTO.

NOTE: This chart covers virgin wool and not recycled wool.

1 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

2 Conventional/unknown includes the volumes of wool programs for which data was unavailable or inaccessible at the launch of the report.

3 In July 2024, the SustainaWOOL Integrity Scheme (SWIS) transitioned into the Australian Wool Sustainability Scheme (AWSS). As part of this transition, SustainaWOOL Green is now known as SustainaWOOL; Sustainablue is now known as ResponsiWOOL, and SustainaWOOL Gold is no longer offered. The key difference between SustainaWOOL Green and Gold (SustainaWOOL under AWSS) and Sustainablue (ResponsiWOOL under AWSS) is that the former includes only non-mulesed or ceased-mulesed wool, while the latter allows mulesing (or liquid nitrogen use) with pain relief. Production volumes for 2024 include volumes from both the SWIS and the AWSS.

Virgin sheep wool
Production facts and figures

Production volumes were not available at the time of reporting for the following programs covering sheep, which were developed for the food sector but from which wool might have been an output: Certified Humane®, Land to Market, organic, Pasture for Life, Global Animal Partnership (G.A.P) Animal Welfare Certified, and A Greener World (AGW).

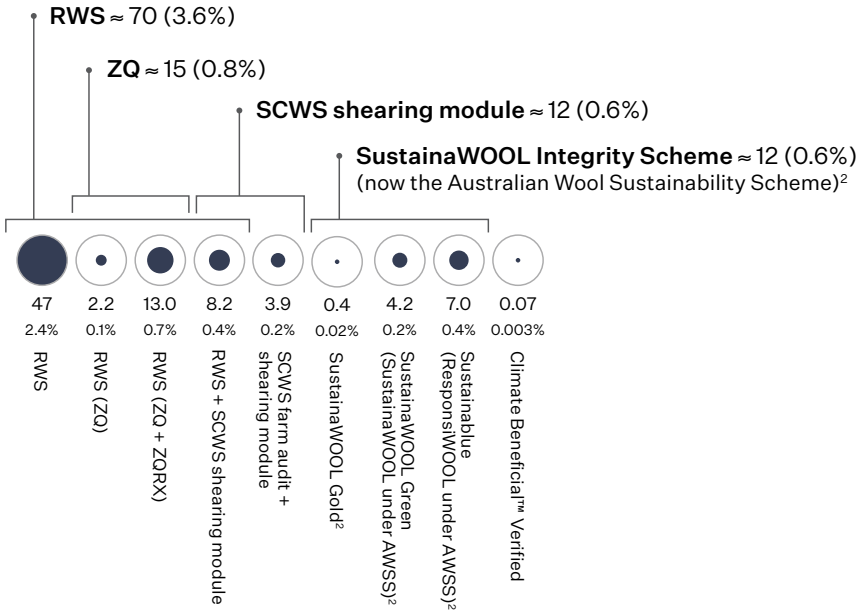
Responsible Wool Standard (RWS)[1] greasy wool production declined from 79,938 tonnes (4.0% of global greasy wool production) in 2023 to 70,389 tonnes (3.6%) in 2024, despite total land area and the total number of certified farmers under RWS having increased. This trend is a result of low wool prices in 2024 and certified wool often not being sufficiently rewarded by the market. Some larger commercial farms have dropped out of certification or, in some cases, have reported ceasing wool production altogether due to market pressures.

The Communal Farmer Group Certification model, launched by Textile Exchange in 2021, has broadened access to certification, now including farmers with no or limited land tenure, such as nomadic and semi-nomadic farmers. Further adaptations to this model are being piloted as part of the Materials Matter Standard development, aiming to improve accessibility for these farmers.

Global greasy wool production by program in 2024 (thousand tonnes) and share of total greasy wool (%)

Total wool: 1.98 million tonnes of greasy wool

Covered by the programs below:
86 thousand tonnes of greasy wool (4.3%)



Source: Textile Exchange based on IWTO and program owners.

1 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

2 In July 2024, the SustainaWOOL Integrity Scheme (SWIS) transitioned into the Australian Wool Sustainability Scheme (AWSS). As part of this transition, SustainaWOOL Green is now known as SustainaWOOL; Sustainablue is now known as ResponsiWOOL, and SustainaWOOL Gold is no longer offered. The key difference between SustainaWOOL Green and Gold (SustainaWOOL under AWSS) and Sustainablue (ResponsiWOOL under AWSS) is that the former includes only non-mulesed or ceased-mulesed wool, while the latter allows mulesing (or liquid nitrogen use) with pain relief. Production volumes for 2024 include volumes from both the SWIS and the AWSS.

Virgin sheep wool
Production facts and figures

To date, most RWS-certified wool is Merino wool. By the end of 2024, an estimated 23 million sheep were under RWS certification. In addition to animal welfare, the RWS also addresses land management. With the launch of RWS 2.0 in March 2020, Textile Exchange introduced new biodiversity requirements, and a module focused on social welfare on farms. By the close of 2024, over 29 million hectares of land were certified under RWS.

The RWS has also seen strong adoption through the supply chain, particularly in key apparel wool-processing countries such as Italy and China. With the release of the RWS 2.0, the supply chain certification for RWS, the Responsible Mohair Standard (RMS), and the Responsible Alpaca Standard (RAS) were integrated into a single scope under the Responsible Animal Fibers (RAF) certification.[1]

The primary goal of Textile Exchange's standards, including RWS, RMS, and RAS, is currently to help farmers realize and achieve high standards of animal welfare, particularly for animals raised in extensive grazing systems. This is ensured through audited standards covering all aspects of animal care, evaluating farm practices to ensure they meet high welfare criteria.[1]

Climate Beneficial™ Verified[2] greasy wool production remained at around 65 tonnes in 2024, the same as in 2023. All Climate Beneficial™ Verified wool was produced in the United States and, in 2024, involved around 17,900 sheep.

Certified Humane® wool was produced on a small scale on two farms in the United States in 2024, but production data was not available at the time of reporting. Textiles made from this wool were not labeled Certified Humane® as some parts of the supply chain could not be audited.

A Greener World, which is active in the United States, Canada, the United Kingdom, Ireland, Portugal, Australia, Ecuador, and France, has four certifications that are used to certify animals producing wool and/or raw hides for leather. These certifications include Certified Animal Welfare Approved by AGW, Certified Grassfed by AGW, Certified Non-GMO by AGW, and Certified Regenerative by AGW. Production volume data was not available.

Photo: Joya Berrow

1 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

2 The Climate Beneficial™ Fiber Program has changed its name to the Climate Beneficial™ Verified Program and, in 2024/25, introduced a transitional track named Climate Beneficial™ Verified-Transitional (CBV-T) in addition to Climate Beneficial™ Verified (CBV).

Virgin sheep wool
Production facts and figures

Pasture for Life had approximately 30,000 sheep under Pasture for Life management in 2024, compared to 23,000 in 2023. Data on the volume of wool produced from these sheep was not available.

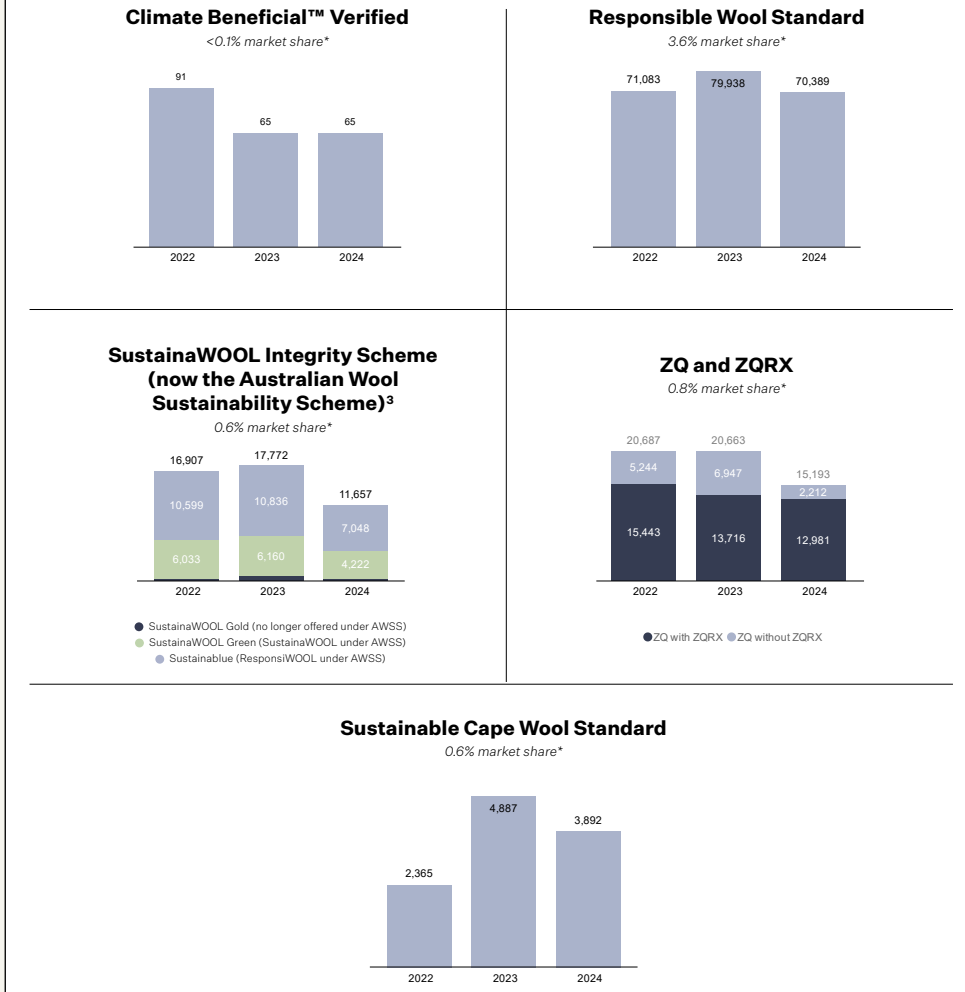
Sustainable Cape Wool Standard (SCWS), developed by Cape Wools SA, had a total of 3,892 tonnes of greasy wool certified under its farm audit in 2024, down from 4,887 tonnes in 2023. In addition, 8,160 tonnes of RWS-certified greasy wool was certified under the SCWS shearing module, down from 11,246 tonnes in 2023. These declines are largely due to the validity of the standard reducing from three to two years, meaning some farms lost certification before they could be re-audited under the new timeline. Volumes are expected to increase in 2025.

SustainaWOOL Green (SustainaWOOL under AWSS) production was 4,222 tonnes in 2024, down from 6,160 tonnes in 2023. SustainaWOOL Gold (no longer offered under AWSS) production was 387 tonnes, down from 777 tonnes in 2023. Sustainablue (ResponsiWOOL under AWSS) was 7,048 tonnes, down from 10,836 tonnes in 2023.[2] The key difference between SustainaWOOL Green and Gold (SustainaWOOL under AWSS) and Sustainablue (ResponsiWOOL under AWSS) is that the former includes only non-mulesed or ceased-mulesed wool, while the latter allows mulesing when pain relief is used.

ZQ-certified greasy wool (New Zealand Merino), which is produced in New Zealand and Australia, had a total production volume of around 15,193 tonnes in 2024, down from 20,663 tonnes in 2023. This decline is attributed to a combination of extended dry periods adding challenges to farmers, and the costs of certification not always being sufficiently rewarded by the market. ZQ accounted for around 0.8% of global sheep wool production in 2024, with all ZQ wool also being RWS-certified. Additional regenerative outcome measurement according to ZQRX was carried out for around 85% of all ZQ wool produced in 2024.

Information on the market share of non-mulesed wool can be found on the non-mulesed wool market page.

Global greasy wool production by program (tonnes)[1]



* Market shares refer to the estimated percent of global virgin wool production covered by the program in 2023/24.

1 Program data is based on information from program owners, received through email correspondence or from their websites. The production volumes reported here include the total volume produced per program including equivalents and overlaps with other standards.

2 In July 2024, the SustainaWOOL Integrity Scheme (SWIS) transitioned into the Australian Wool Sustainability Scheme (AWSS). As part of this transition, SustainaWOOL Green is now known as SustainaWOOL; Sustainablue is now known as ResponsiWOOL, and SustainaWOOL Gold is no longer offered. The key difference between SustainaWOOL Green and Gold (SustainaWOOL under AWSS) and Sustainablue (ResponsiWOOL under AWSS) is that the former includes only non-mulesed or ceased-mulesed wool, while the latter allows mulesing when pain relief is used. Production volumes for 2024 include volumes from both the SWIS and the AWSS. Production volumes use auction sales as a proxy. Data is not currently available on non-auction sales.

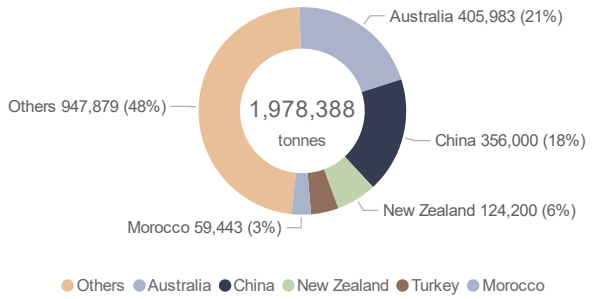
Virgin sheep wool

Where to find wool programs across the globe

Despite overall RWS production declining in 2024, some key apparel wool-producing countries/areas showed an increase in production, and even those that saw a decrease continue to have considerable market shares.

Most significantly in terms of both volume and market share, 34% of all wool produced in South Africa was RWS-certified.[1] This figure was 43% in Uruguay, 19% in Argentina, 16% in Chile, 11% in New Zealand, and 5% in Australia. Climate Beneficial™ Verified wool had a market share of 0.7% in the United States. ZQ (which is also RWS-certified) had a market share of 10% in New Zealand and 0.6% in Australia. In South Africa, the SCWS farm audit had a market share of 8%. In Australia, SustainaWOOL Green (SustainaWOOL under AWSS) had an estimated market share of 1.0%, SustainaWOOL Gold 0.1%, and Sustainablue (ResponsiWOOL under AWSS) 1.7%. While the volumes are small, certification of farms in China occurred for the first time in 2024.

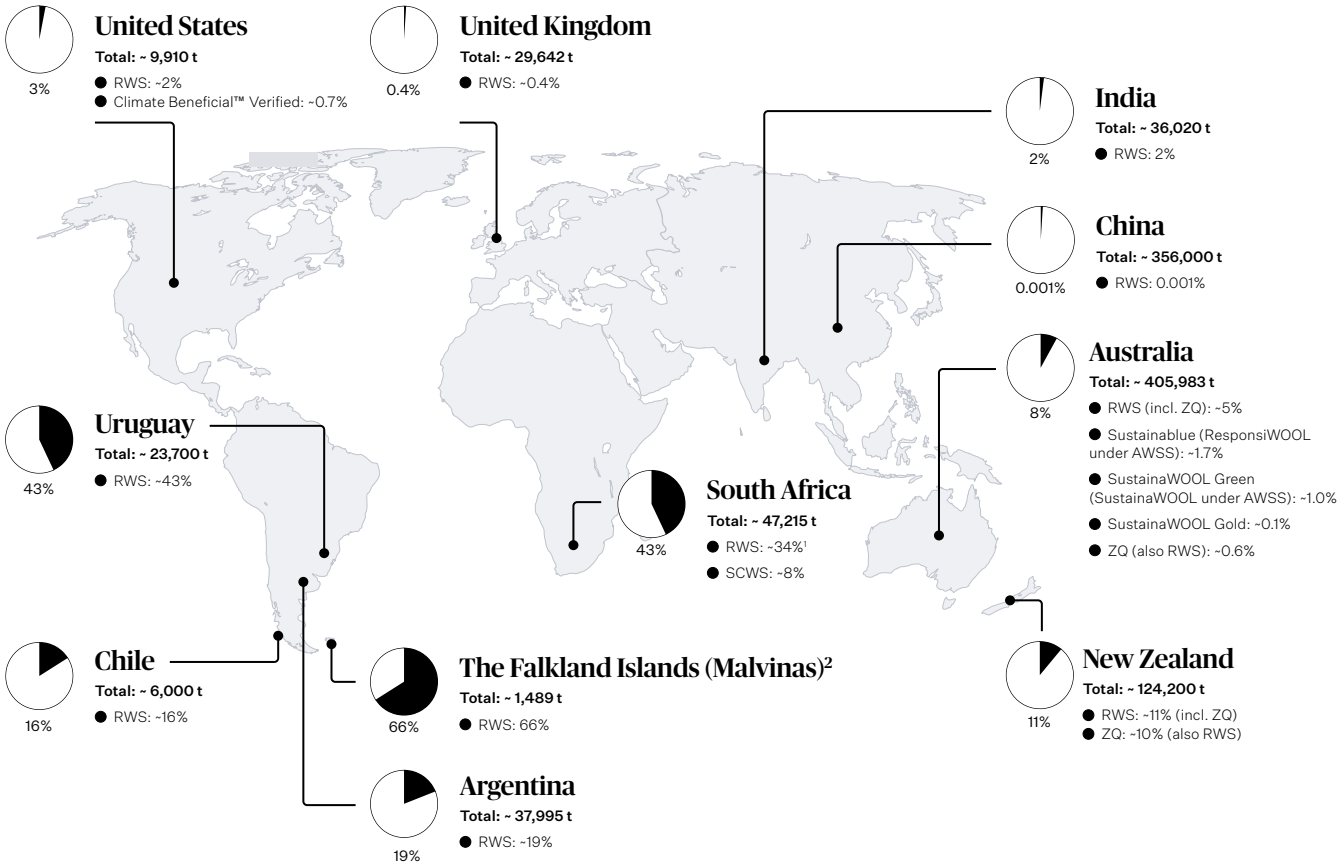
Global greasy wool production by country in 2024 (tonnes)



Source: Textile Exchange based on IWTO.

NOTE: This chart covers virgin wool and not recycled wool.

Market share of wool programs by country/area [3,4,5]



1 Textile Exchange uses Cape Wools SA data for RWS production in South Africa. Cape Wools SA is the official wool data collection body in South Africa and collects data on total wool production as well as for wool programs such as SCWS, RWS, and Abelusi.

2 A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

3 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

4 Only wool-producing countries with production according to the following programs are displayed: RWS, Climate Beneficial™ Verified, SCWS, SustainaWOOL Green (SustainaWOOL under AWSS), SustainaWOOL Gold (no longer offered), Sustainablue (ResponsiWOOL under AWSS), ZQ, and ZQRX. Production volumes were not available at the time of reporting for the following programs covering sheep that were developed for the food sector but from which wool might be an output: Certified Humane®, Land to Market, organic, Pasture for Life, Global Animal Partnership (G.A.P) Animal Welfare Certified, and A Greener World.

5 Market shares are given in percentages compared to overall wool production based on ITWO data as mentioned in (3). Total wool production figures per country are for greasy wool.

Virgin sheep wool
The non-mulesed wool market

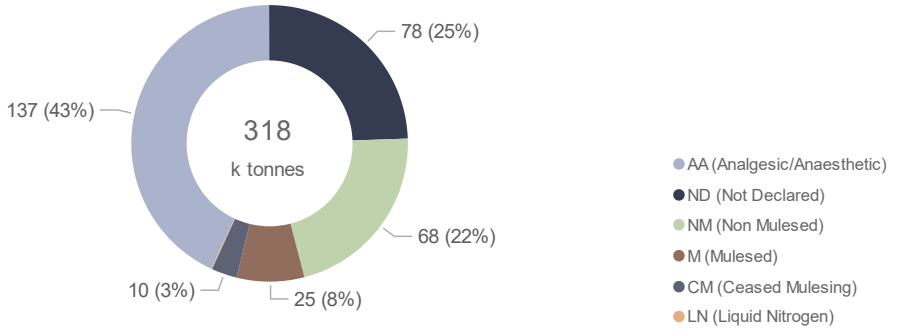
Mulesing, defined as the removal of wool-bearing strips of skin from between the hind legs (the breech area), tail skin folds, or tail skin wrinkles of sheep to prevent flystrike, remains a key issue in wool production.

Since New Zealand banned mulesing in 2018, Australia, which holds around 21%[1] of the global greasy wool market, is now the only country where the practice continues. Therefore, the risk of sourcing wool produced with mulesing practices remains high without a traceability system to ensure the wool is mulesing-free.

It's important to recognize that different forms of mulesing exist: traditional mulesing using shears, freeze mulesing (steining) with liquid nitrogen, and the use of rubber rings, commonly employed for tail docking or castration, to remove loose skin from the breech area. In September 2019, Four Paws and Humane Society International opposed freeze mulesing due to the severe pain it causes sheep. Both organizations, along with Textile Exchange, oppose any form of breech mutilation or modification.

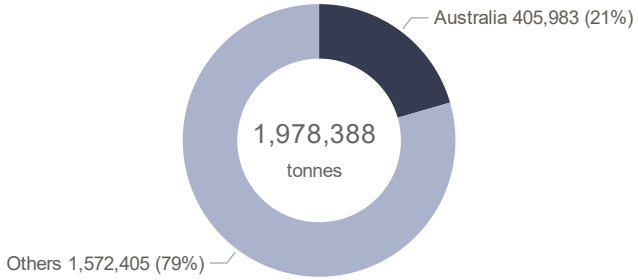
The definition of mulesing typically includes all forms of breech mutilation or modification, including steining. However, the Australian Wool Exchange (AWEX) only includes "the removal of skin from the breech and/or tail of a sheep using mulesing shears" in its definition.[2]

Mulesing status of greasy wool in Australia in 2024 (thousand tonnes and %)[3]



Source: Textile Exchange based on AWEX.

Market share of greasy wool in Australia in 2024 (tonnes)[3]



Source: Textile Exchange based on IWTO.

1 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

2 Australian Animal Welfare Standards and Guidelines for Sheep prepared by Animal Health Australia, V1.0 2016.

3 The total greasy wool production volume for Australia reported by AWEX (318,000 tonnes) is lower than the volume reported by IWTO (405,983 tonnes) due to the AWEX total only including fresh shorn wool volumes, whereas the IWTO total also includes estimates of wool from skins and live exports.

Virgin sheep wool
The non-mulesed wool market

As a result, before Version 9.3 of the National Wool Declaration (NWD) became effective in July 2022, in which AWEX expanded its definition of "non-mulesed" to exclude treatment with liquid nitrogen as well as mulesing (and introduced a new labeling category for wool produced by sheep treated with liquid nitrogen—LN), wool sold as non-mulesed under the AWEX definition could still have been produced using freeze mulesing (steining).[1]

In NWD Version 10.0, effective July 2024, minor revisions were made to the NWD definitions to improve clarity.[2]

Certifications such as the Responsible Wool Standard (RWS), ZQ, SustainaWOOL Green (SustainaWOOL under AWSS), and SustainaWOOL Gold (no longer offered under AWSS) ensure their wool is sourced from farms that have never mulesed or have ceased mulesing. Organic wool certified under the Organic Content Standard (OCS) must also be non-mulesed or from farms with a ceased-mulesing status as per the latest revision (OCS 3.0) launched in April 2020. Additionally, the Global Organic Textile Standard (GOTS) 6.0, introduced in March 2020, includes mulesed wool in its list of prohibited fibers.

Australian National Wool Declaration (NWD) definitions as of Version 10.0, effective July 2024:[2]

M **Mulesed**:
Sheep in this mob have been mulesed* without the use of an analgesic and/or anaesthetic product registered by APVMA.

AA **Analgesic/Anaesthetic**:
Sheep in this mob have been mulesed* with the use of an analgesic and/or anaesthetic product registered by APVMA.

LN **Liquid Nitrogen**:
Sheep in this mob have been treated with liquid nitrogen.

ND **Not Declared**

CM **Ceased Mulesing**:
No lambs born on this property in the last 12 months have been mulesed*, and no mulesed (or AA) ewes or wethers have been purchased in the last 12 months.

NOTE: For a property to be eligible for CM status, the answer to both CM property questions must be "no".

NM **Non Mulesed**:
Sheep in this mob have not been mulesed* or treated with liquid nitrogen.

*** Mulesing definition adopted by AWEX**:
"The removal of skin from the breech and/or tail of a sheep using mulesing shears."[2]

Photo: Tristan McKenzie

1 National Wool Declaration (NWD), 2022. *National Wool Declaration (NWD) V9.3. Business Rules for MS. Issue 1*. Revisions to the NWD definitions introduced in V9.3 include 1) the introduction of the LN category and 2) Revisions to the Non Mulesed definition from "No sheep in this mob have been mulesed" to "No sheep in this mob has been mulesed or treated with liquid nitrogen."

2 National Wool Declaration (NWD), 2023. *National Wool Declaration (NWD) V10.0. Business Rules for MS. Issue 1*. Revisions to the NWD definitions introduced in V10.0 include 1) The addition of the following note to the Ceased Mulesing (CM) category: "Note: For a property to be eligible for CM status, the answer to both CM property questions must be No." and 2) Revisions to the wording of the Non-Mulesed definition from "No sheep in this mob have been mulesed or treated with liquid nitrogen" to "Sheep in this mob have not been mulesed or treated with liquid nitrogen."

Recycled sheep wool
Production facts and figures

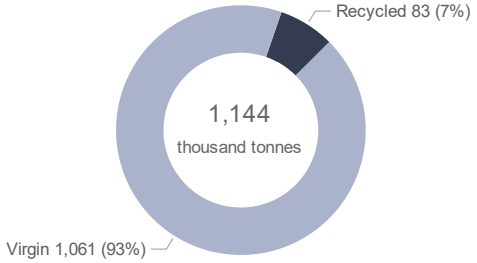
Wool recycling has a long history. Accounting for around 7% of the global wool market, recycled wool had an estimated production volume of 83 thousand tonnes in 2024, up from 79 thousand tonnes in 2023.[1,2]

The Italian district of Prato is a major producer of recycled wool, producing approximately 35 thousand tonnes of the fiber in 2024.[3] Other major production centers for wool recycling are China and the Indian city of Panipat.

Recycled standards

The key standards for recycled wool are the Recycled Claim Standard (RCS), Global Recycled Standard (GRS),[4] and Cardato Recycled for recycled wool from Prato, Italy.

Global recycled wool market share 2024 (thousand tonnes)



Source: Textile Exchange based on IWTO and Maia Research.

Photo: Shutterstock

1 Maia Research, 2025. *Global Recycled Wool Market Report 2025*. Commissioned report.

2 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

3 Cardato. Email correspondence, April 2025.

4 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

The global fiber market

Other animal fibers

Virgin mohair
Production facts and figures

Mohair is the hair of the Angora goat (not to be confused with the Angora rabbit, which produces Angora wool). In 2024, around 4,748 tonnes of greasy mohair fibers were produced globally.

Just over half of the world's mohair (2,600 tonnes) was produced in South Africa. The remaining mohair was produced in Lesotho (730 tonnes, accounting for 15% of global mohair production), Argentina (339 tonnes, accounting for 7%), Turkey, (399 tonnes, accounting for 8%), the United States (230 tonnes, accounting for 5%), Australia (90 tonnes, accounting for 2%), New Zealand (30 tonnes, accounting for 1%), and other countries (330 tonnes, accounting for 7%).[1]

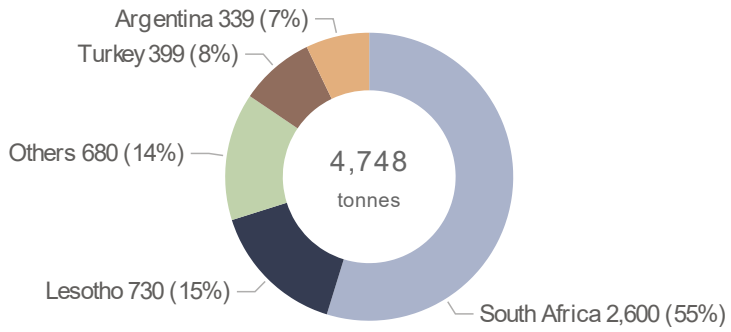
The South African mohair industry has been governed by its own Sustainable Mohair Production Guidelines since 2009. These industry guidelines have been developed and regularly revised by the South African Mohair Growers Association.

The Responsible Mohair Standard (RMS) was the evolution of the increasing importance of, and demand for, an independent, third-party audited, international standard. Textile Exchange launched the RMS in 2020 in response to requests from stakeholders. Along with the Responsible Alpaca Standard (RAS) it aligns with the Responsible Wool Standard (RWS) in terms of content covering animal welfare, land management, and people. The latest version, RMS 1.2, was released in 2021.[2]

The market share of RMS mohair reached 50% of all mohair produced worldwide in 2024, up from 47% in 2023.

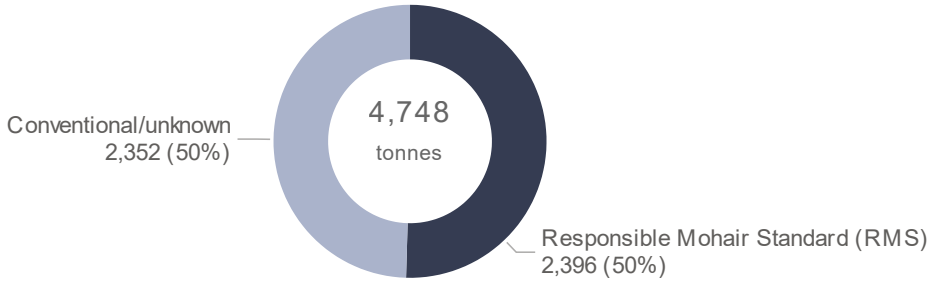
RMS fibers were produced in South Africa, Australia, and, for the first time, Argentina in 2024, with production totaling 2,396 tonnes. The RMS market share reached 90% of all greasy mohair produced in South Africa, 51% of total mohair production in Australia, and 0.1% of total mohair production in Argentina in 2024.

Global greasy mohair fiber production by country in 2024 (tonnes)



Source: Mohair South Africa

Global market share of the Responsible Mohair Standard in 2024 (tonnes)



Source: Textile Exchange based on Mohair South Africa and RMS.

1 Mohair South Africa. Email correspondence, March 2025.

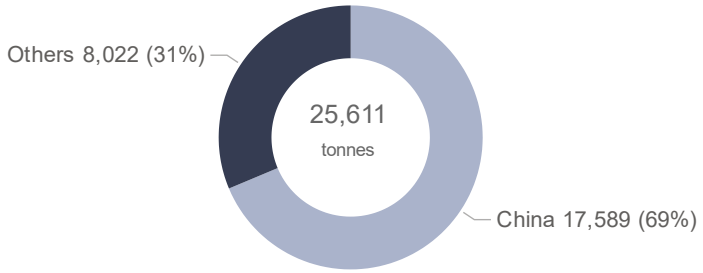
2 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Virgin cashmere
Production facts and figures

Cashmere is the hair of the cashmere goat. Globally, around 25,611 tonnes of greasy cashmere fibers were estimated to have been produced in 2024.[1] Around 69% of this was produced in China.[2]

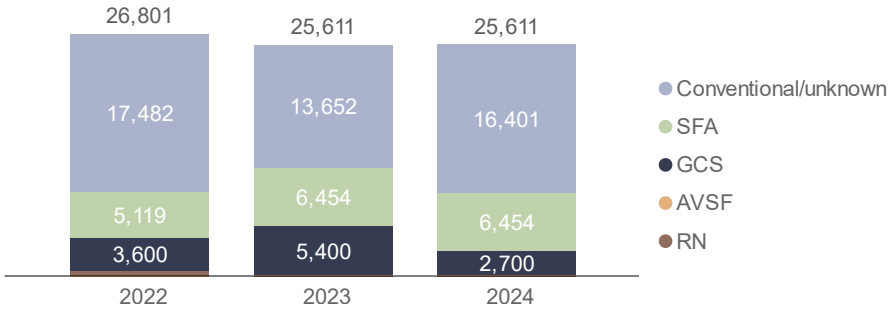
The global market share of cashmere produced according to the listed programs[3]—Agronomists and Veterinarians Without Borders (AVSF) Sustainable Cashmere Certification, The Good Cashmere Standard® (GCS), Responsible Nomads, and the Sustainable Fiber Alliance (SFA) Cashmere Standard—was estimated to be 36% (9,210 tonnes) in 2024. This follows a peak in 2023 when the market share was an estimated 47% (around 11,959 tonnes). Production in 2024 is similar to that in 2022, when the market share was an estimated 35% (9,319 tonnes).[4] This trend is reported to be in response to low market demand and certified cashmere often not being sufficiently rewarded by the market.

Global cashmere production by country in 2024 (tonnes)



Source: Textile Exchange based on IWTO and National Bureau of Statistics of China.

Global cashmere production by program in 2024 (tonnes)



Source: Textile Exchange based on AVSF, GCS, IWTO, RN, and SFA.

1 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

2 Textile Exchange based on National Bureau of Statistics of China, 2024.

3 The Wildlife Conservation Society (WCS) program that was previously included in this report has gone through a substantial review and now focuses on the scientific research and monitoring required for verifying practices, transitioning away from direct engagement with the community and cashmere sale processes. The South Gobi Cashmere Program cooperatives are now managed by the Good Growth Company, one of the projects selected by Regenerative Fund for Nature in 2021. Since the project focuses on a landscape-based approach rather than a certified product approach, we aim to include it in the Materials Directory going forward, rather than listing it here as a standard system.

4 Textile Exchange compilation based on source (1) and data provided by the program(s): AVSF, GCS, RN, and SFA. Please note it is possible that there is an overlap in the production volumes reported for the different programs.

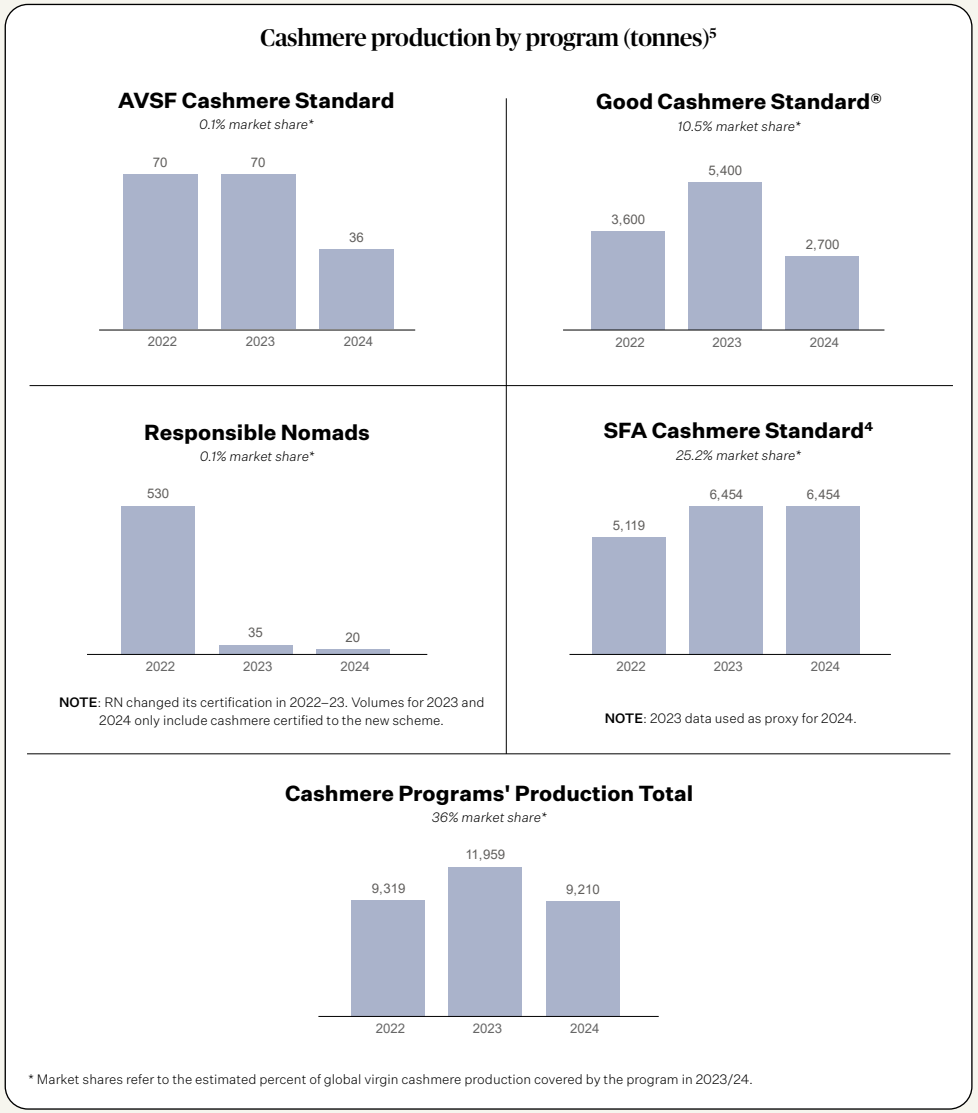
Virgin cashmere
Production facts and figures

Agronomists and Veterinarians Without Borders (AVSF) produced 36 tonnes of greasy cashmere fiber from around 96 thousand goats in Mongolia under its Sustainable Cashmere Certification in 2024, accounting for 0.1% of all cashmere produced worldwide.[1] AVSF's production has roughly halved since 2023, when 70 tonnes of greasy cashmere fiber was produced—a trend attributed to low market demand causing producers to seek other market opportunities.

The Good Cashmere Standard® (GCS), developed by the Aid by Trade Foundation in 2019, produced 2,700 tonnes of greasy cashmere fiber in 2024 from around 2.4 million goats in China, representing a decrease from 2023, when 5,400 tonnes of fiber were produced. GCS accounted for around 15% of all cashmere produced in China in 2024, and around 11% of all cashmere produced worldwide.[1,2] The decline is attributed to low market demand.

The Responsible Nomads program, previously referred to as Green Gold and Animal Health program,[3] adopted a new certification scheme between 2022 and 2023. Only cashmere produced under the new scheme is included in the volumes reported for 2023 and 2024, hence the significant drop from the 530 tonnes reported for 2022. Between 2023 and 2024, production fell from 35 to 20 tonnes.

The Sustainable Fiber Alliance (SFA), with its SFA Cashmere Standard, produced an estimated 6,454 tonnes of greasy cashmere fiber in 2024.[4]



1 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

2 Textile Exchange based on National Bureau of Statistics of China, 2024.

3 Responsible Nomads: The Green Gold and Animal Health Project of the Swiss Agency for Development and Cooperation (SDC) and Mongolian National Federation of Pasture User Groups of Herders (MNFPUG) have partnered in the development and implementation of this program.

4 2024 production data for SFA was not available at the time of reporting so 2023 has been used as a proxy. In December 2024, the SFA Cashmere Standard v1.0 was replaced with the SFA Animal Fibre Standard. Volumes reported for 2024 were still covered under the SFA Cashmere Standard.

5 Program data is based on information from program owners, received through email correspondence or from their websites. The production volumes reported here include the total volume produced per program including equivalents and overlaps with other standards. It is therefore possible that there is overlap in the production volumes reported for the different programs.

Virgin alpaca
Production facts and figures

Alpaca fiber is the hair gathered from alpacas, a species of South American camelid native to Peru. Global alpaca fiber production was estimated to be 6,200 tonnes in 2024, of which 72% (4,452 tonnes) came from Peru.[1]

Historically, alpaca fiber was reserved for royalty due to its fine micron range. Today, most alpacas still reside in the highlands of Peru, at altitudes ranging from 11,000 to 16,000 feet (3,500 to 5,000 meters). About 4 million alpacas live in Peru, with a small percentage in other countries like Bolivia, Australia, the United Kingdom, and the United States. The vast majority (95%) belong to the Huacaya breed, with the remaining 5% classified as Suri.

Huacaya fleece is the primary variation used in textile and knitwear production. The current supply chain is centralized in Peru, where around 90% of the processing is handled by two main suppliers with vertically integrated operations. Additionally, several smaller producer groups operate independently.

More than 90% of the fiber produced in Peru comes from smallholder farmers who typically own around 45 animals. Currently, alpaca fiber is collected and sold by middlemen before being processed by the two large processors.[2]

Key standards

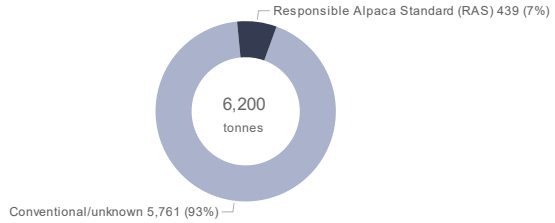
The Responsible Alpaca Standard (RAS), launched in April 2021, is a voluntary global standard that addresses the welfare of alpacas, the land they graze on, and social welfare at the farm level.[3]

In 2024, the global market share of RAS-certified alpaca fiber was 7% (439 tonnes). This is up from 5% (316 tonnes) in 2023. In Peru, where all RAS-certified alpaca fiber was produced in 2024, 10% of the country's total alpaca fiber production was RAS-certified. Most of the certified fiber is already committed to specific supply chains, and it will take time to increase the volume available on the open market.

Alpaca farming in Peru is based on extensive grazing and free-ranging husbandry systems, with animals adapted to their environment.

The RAS was developed at the request of stakeholders to verify that alpaca fiber comes from responsible sources covering farm-level animal welfare practices, land management, and social welfare. Chain of custody certification ensures that fiber from certified farms is properly identified and tracked. The RAS is part of the Responsible Animal Fiber (RAF) framework, along with the RWS and RMS.[3]

Global market share of Responsible Alpaca Standard in 2024 (tonnes)



Source: Textile Exchange based on IWTO and RAS.

Photo: Alejandra Orosco

1 IWTO, 2024. *Market Information. Edition 19*. 2024 data was not available so 2023 is used as a proxy.

2 Minagri, 2019. *Potencial Productivo y Comercial de la Alpaca*.

3 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Virgin silk
A global overview

Silk is another animal-based fiber, though its share of the overall fiber market is small. Approximately 300,000 households are involved in raw silk production.[1]

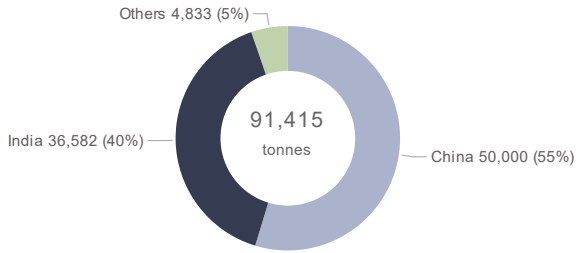
In 2024, global raw silk production was estimated to be around 91,415 tonnes.[2,3]

While global silk production more than doubled between 1990 and 2015, it has since more than halved again.[4,5]

China and India together accounted for an estimated 95% of global silk production in 2024, with China contributing 55% and India 40%.[3]

Silk programs include organic standards such as the India Organic Regulation, the Organic Content Standard (OCS), and the Global Organic Textile Standard (GOTS). Other standards include Certified Wildlife Friendly® and the World Fair Trade Organization (WFTO). For recycled silk, the Global Recycled Standard (GRS) and the Recycled Claim Standard (RCS) can be used.[5]

Global silk production in 2024 (tonnes)



Source: Textile Exchange based on FAOSTAT.

Photo: Shutterstock

1 DNFI, 2020. *40 Million Households Produce Natural Fibers*.

2 Raw silk is defined by the FAO as "Obtained by reeling the filaments from cocoons. Not thrown."

3 FAOSTAT, 2025. Database. Accessed June 2025. 2022 data was the latest available at the time of reporting and is therefore used in this report as a proxy for 2023 and 2024.

4 Please note that historical FAOSTAT data on silk production has been revised a number of times by FAOSTAT. We will always report the latest FAOSTAT data available at the time of reporting.

5 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Other virgin animal fibers
Production facts and figures

Other animal fibers (beyond sheep wool, cashmere, mohair, alpaca, and silk) include those from yaks, camels, llamas, vicunas, guanacos, and angora rabbits.

Yak fiber, primarily sourced from the Himalayas and regions of Mongolia and Central Asia, has been used in the Himalayan region for over a thousand years and has recently gained recognition as a premium fiber in the international fashion industry. In 2024, an estimated 3,465 tonnes of yak hair were produced.[1]

Camel hair is sourced from camels, with major suppliers including Mongolia, Tibet, Afghanistan, Iran, Russia, China, New Zealand, and Australia. In 2024, an estimated 4,060 tonnes of camel hair were produced.[1]

Llama, vicuña, and guanaco, all camelids native to South America, also provide valuable fibers. While llamas are domesticated, guanacos and vicuñas are wild camelids related to llamas and alpacas, living in the high alpine areas of the Andes. Their extremely fine wool is highly valuable. In 2024, an estimated 2,800 tonnes of llama wool, 7 tonnes of vicuña wool, and 2 tonnes of guanaco wool were produced.[1]

Angora wool comes from Angora rabbits (distinct from mohair, which is sourced from Angora goats). In 2024, an estimated 500 tonnes of angora wool were produced.[1]

Photo: Angela Ponce

1 IWTO, 2024. *Market Information. Edition 19*. Volumes reported are the greasy weight. 2024 data was not available so 2023 is used as a proxy.

The global fiber market

Manmade cellulosic fibers

Virgin manmade cellulosic fibers

Production facts and figures

With an annual production volume of around 8.4 million tonnes in 2024, manmade cellulosic fibers (MMCFs)—including viscose (rayon), acetate, lyocell, modal, and cupro—had a market share of around 6% of global fiber production.[1]

Global MMCF production has more than doubled since 1990, when annual production was around 3 million tonnes, and is expected to continue growing in the coming years.[1]

Viscose (rayon) made up the majority of the global MMCF market (80%), with a total production volume of around 6.7 million tonnes in 2024.[1]

Acetate had a market share of around 13% of all MMCFs in 2024, with a production volume of approximately 1.1 million tonnes,[1] but is mainly used for non-textile applications.[2]

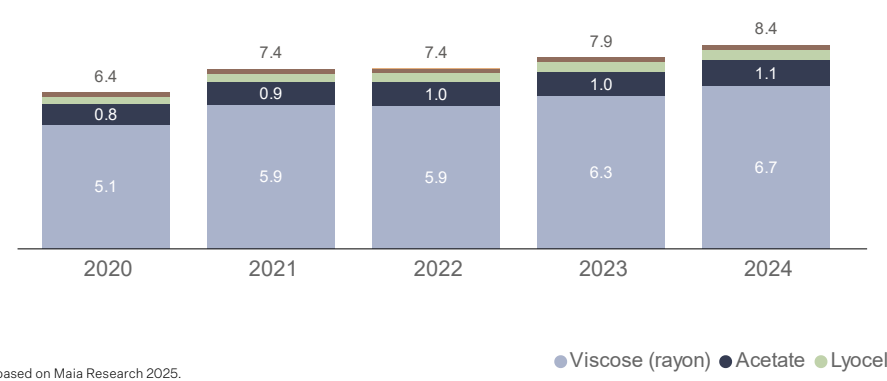
Lyocell was the third-most used MMCF type in 2024, after viscose and acetate. It had a market share of around 5% of all MMCFs, with a production volume of around 0.4 million tonnes.[1]

Modal had a market share of around 3% of the total MMCF market in 2024, with a production volume of around 0.2 million tonnes.[1]

Cupro had a market share of around 0.2% of the total MMCF market. There was only one supplier of cupro, which produced around 0.02 million tonnes in 2024.

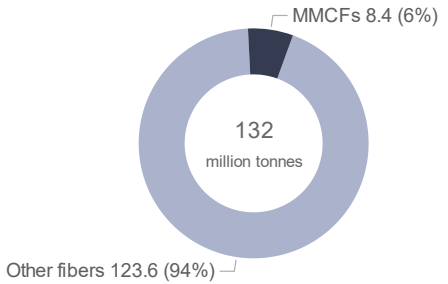
Currently, manmade cellulosic fibers are primarily produced from wood. Around 1.1% of the global market is currently made from recycled or other alternative feedstocks.

Global MMCF production (million tonnes)



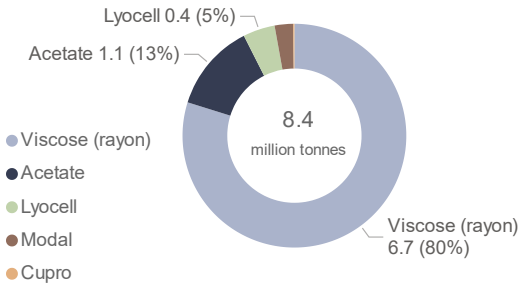
Source: Textile Exchange based on Maia Research 2025.

Global market share of MMCFs in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

Global MMCF production by type in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research 2025.

1 Maia Research, 2025. *Global Manmade Cellulosic Fiber Market Report 2025*. Commissioned report.

2 More information on the applications by fiber is available in the methodology.

Virgin manmade cellulosic fibers

Standards for feedstock

MMCFs produced using FSC- and/or PEFC-certified or controlled feedstock had an estimated market share of around 65–70% of all MMCFs in 2024.[1]

The Forest Stewardship Council (FSC), founded in 1993, is an international member-led organization that sets standards for responsible forest management and chain of custody. The first textile products with consumer-facing FSC labels hit the market in 2020.[2]

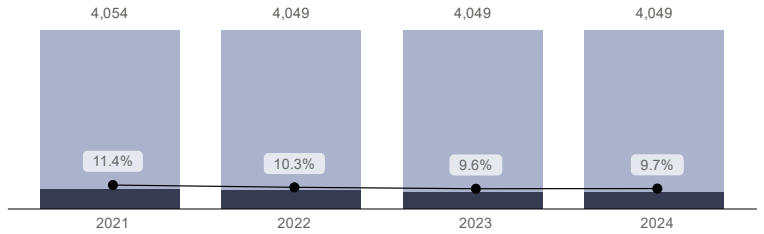
The Programme for the Endorsement of Forest Certification (PEFC), founded in 1999, is a global alliance of national forest certification systems and is the largest forest certification system worldwide. Brands and retailers first started using consumer-facing communication for PEFC textiles in 2022.[3]

Overall, the share of global forest area covered by FSC and/or PEFC increased slightly, from around 9.6% in 2023 to around 9.7% in 2024.[4,5]

In total, around 7.3% of all certified forests were covered by PEFC and its equivalents in 2024, with roughly half of this covered by Sustainable Forestry Initiative (SFI), a key PEFC-endorsed forest certification system operational in Canada and the United States. Approximately 3.9% of all forests were covered by FSC in 2024.

Due to the double certification of around 1.5% of all forests, 9.7% (and not 11.3%) of all forests were covered by FSC and/or PEFC in 2024.[4,5]

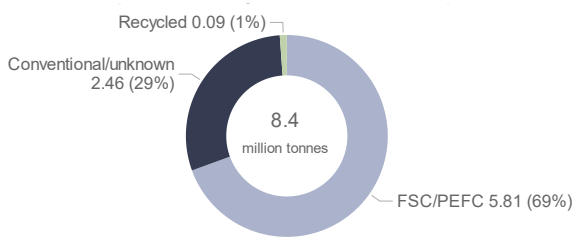
Forest programs (million hectares) and % of forest area covered by the programs



Source: Textile Exchange based on FAO,[4] FSC, PEFC, and SFI.

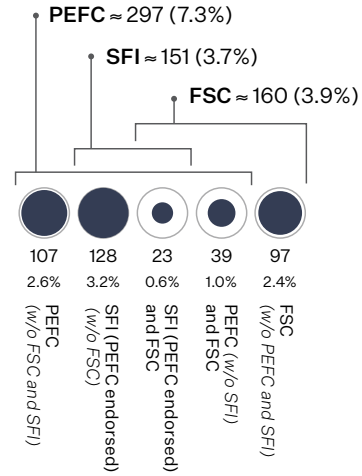
NOTE: Volumes include both certified and controlled volumes.

Global MMCF production by feedstock in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research, CanopyStyle audit reports, and other additional sources.

Forest programs in 2024 (million hectares) and share of total forest area (%)



1 Textile Exchange estimate based on publicly available information and its own supplier mapping.

2 FSC. Email correspondence.

3 PEFC. Email correspondence.

4 FAOSTAT, 2025. Database. Accessed June 2025. 2023 and 2024 data was not available at the time of reporting so 2022 data has been used as proxy.

5 Based on FSC and PEFC press releases from June 2024, the FSC Database, the PEFC Database, and email correspondence with FSC, PEFC and SFI.

Virgin manmade cellulosic fibers

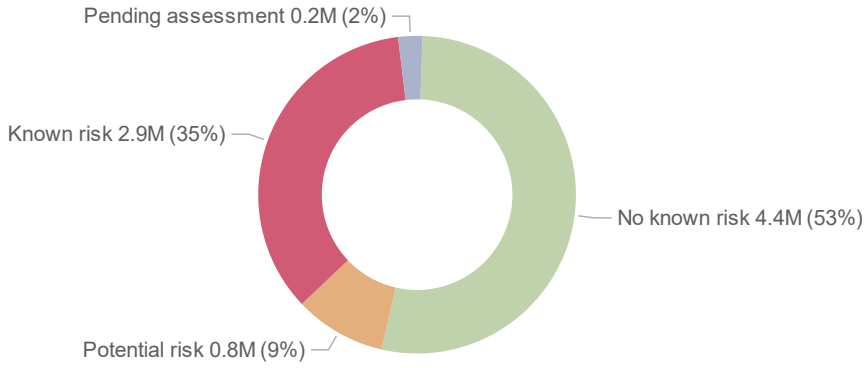
Standards for feedstock

Since their launch in 2017, the CanopyStyle Audits have become the leading assessment of MMCF suppliers' raw material sourcing practices. The results of the audits are fed into Canopy's annual Hot Button Report, which compares the performance of MMCF producers across several impact categories.

In 2024, 80% of the world's MMCF producers were rated using shirt colors in the Hot Button Report, with contributions from 28 producers globally. In terms of production, 97.5% of global MMCF production is now covered by the producers assessed in the Hot Button Report.

In 2024, 53% of global MMCF production was awarded green shirts (either dark, medium, or light green shirt categories).[1] These producers, categorized as no known risk in the adjacent chart, have been audited and assessed as being at low risk of sourcing MMCFs from Ancient and Endangered Forests or have taken substantive action to eliminate known risks in their supply chains. This compares to 50% in 2021, 53% in 2022, and 54% in 2023. The slight decline in the proportion of production from green shirt producers in 2024 is attributed to consolidations (purchasing of other producers) and capacity expansions by red shirt producers.[1]

Risk status of global MMCF production rated in CanopyStyle's Hot Button Report 2024



Source: Textile Exchange based on Canopy Hot Button Report 2024.

NOTE: Capacity is used as a proxy for production volumes. The no known risk category includes dark, medium, or light green CanopyStyle shirt colors. Potential risk includes light green yellow, yellow, and yellow with red shirt colors. Known risk includes red and light green with red shirt colors and those with known risk. Pending assessment includes those newly engaged, newly engaged and acting, and not yet assessed.

1 Canopy, 2025. *CanopyStyle Hot Button Report 2024*.

Virgin manmade cellulosic fibers

Standards for pulp and fiber

Pulp and fiber

Bluesign® developed specific criteria for fiber production that were added in the annex fiber manufacturing to its bluesign® CRITERIA for production sites in March 2020. These criteria apply to the manufacturing of MMCFs and synthetic fibers, such as polyester and polyamide (nylon). Criteria for MMCFs address areas including feedstock, pulp, and fiber production. One MMCF supplier has already become a bluesign® SYSTEM PARTNER and produces bluesign® APPROVED fibers.

Zero Discharge of Hazardous Chemicals (ZDHC) expanded the scope of its work to cover fiber production in 2020. It released guidelines, initially focused on viscose and modal staple fiber, to provide MMCF suppliers with unified criteria for measuring output indicators as well as an aligned approach for the recovery of sulfur compounds, part of the inputs, and by-products generated during the production process.

The latest version is the *Man-made Cellulosic Fibre (MMCF) Guidelines V2.2*, released in August 2023, which expands the scope beyond viscose (rayon) and modal to now also cover lyocell, cupro, and acetate. The updated guidelines also include revisions to the criteria for responsible fiber production, wastewater, and air emissions. In October 2024, ZDHC published new *Dissolved Pulp Guidelines V1.0*, created to address the use and discharge of chemicals in wood-based dissolved pulp manufacturing. The guidelines include chemical recovery, wastewater, and air emission requirements.

Further standards that can be used at the pulp and/or fiber level include Cradle to Cradle Material Health Certificate Standard, OEKO-TEX® STeP certification, and the EU Ecolabel for textile products.

Another option is production in compliance with the EU's Best Available Techniques (BAT) Reference Documents (also referred to as BREFs).

For standards related to MMCFs made from recycled feedstocks, see recycled manmade cellulosic fibers page.

Photo: Sonny Sixteen / Shutterstock

Recycled manmade cellulosic fibers

Supplier updates

The market share of MMCFs made from recycled feedstocks (which include MMCFs made from any recycled cellulosic fiber, not only MMCF-to-MMCF recycling) increased from an estimated 0.7% in 2023 to 1.1% in 2024.[1] Amid ongoing research and development, this figure is expected to continue increasing in the coming years.

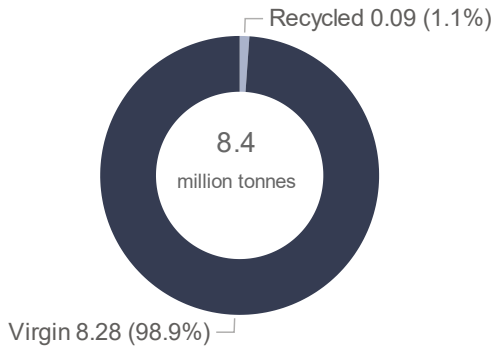
Canopy estimates that recycling just 25% of global pre- and post-consumer cotton textile waste, plus 25% of MMCF textile waste, could replace all wood fiber currently used to manufacture dissolving pulp.[2]

Many MMCFs made from recycled feedstocks are still in development. The first commercially available MMCFs that are partially or wholly made from recycled materials use mainly cotton linter or pre-consumer cotton textile residues as feedstock. The share of MMCFs created from post-consumer textiles is still low but expected to grow.

For MMCFs made from recycled materials, the Recycled Claim Standard (RCS), Global Recycled Standard (GRS),[3] and SCS Recycled Content Certification can be used. The first suppliers of MMCFs made from recycled feedstocks have been RCS-certified.

While recycled textiles make up the bulk of Next Gen fiber production, it's important to also note that several MMCF producers are investing in the use of alternative fibers made from agricultural residues and grasses.

Global MMCF production in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

1 Textile Exchange based on Maia Research, 2025. *Global Recycled Manmade Cellulosic Fiber Market Report 2025* and *Global Manmade Cellulosic Fiber Market Report 2025*. Commissioned reports.

2 Canopy, 2020. *SURVIVAL. A Plan for Saving Forests and Climate: A Pulp Thriller*.

3 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

The global fiber market

Polyester

Recycled polyester
Production facts and figures

Polyester is the most widely used fiber worldwide. With a global production volume of around 78 million tonnes, polyester accounted for approximately 59% of global fiber production in 2024, up from 71 million tonnes (57% of global fiber production) in 2023.[1]

Recycled polyester fiber production increased from around 8.9 million tonnes in 2023 to around 9.3 million tonnes in 2024[2]. However, due to the larger increase in virgin polyester production (from 62 to 68 million tonnes), there was actually a decrease in the overall market share of recycled polyester from around 12.5% of global polyester production in 2023 to around 12.0% in 2024.[3]

Feedstock types

Recycled polyester is predominantly made from polyethylene terephthalate (PET) plastic bottles, which make up an estimated 98% of all recycled polyester feedstock.[2] Recycled polyester can also be made from other post-consumer plastics such as ocean waste, packaging waste, and discarded polyester textiles, or from pre-consumer processing residues such as fabric scraps.

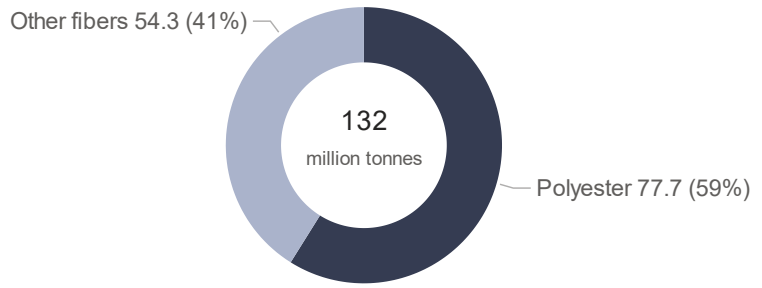
Amid increasing demand for post-consumer bottles within the bottle industry, as well as the wider packaging industry and other sectors, competition for post-consumer bottles is increasing. Textile-to-textile recycling is an important strategy to ensure future feedstock supply for the recycled polyester textile industry, to improve waste management within the industry, and to align with upcoming legislation.

Recycling types

Most recycled polyester is currently recycled mechanically. Key challenges associated with chemical and biological recycling include cost and investment, infrastructural and technological challenges, access to suitable and consistent feedstocks, and energy use. With new operations starting commercial production of chemically recycled polyester, and other companies in the research and development phase, the market share of chemically recycled polyester is expected to grow in the coming years.

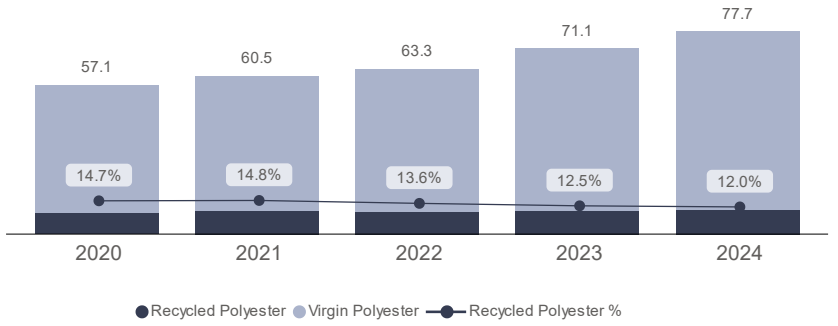
For more information, please see Textile Exchange's 2024 report *The Future of Synthetics*, which dives into the technologies and infrastructure that will facilitate the substitution of new virgin fossil fuel-derived synthetic materials.

Global market share of polyester in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

Global polyester production (million tonnes) and share of recycled (%)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

1 Maia Research, 2025. *Global Polyester Fiber Market Report 2025*. Commissioned report.

2 Maia Research, 2025. *Global Recycled Polyester Fiber Market Report 2025*. Commissioned report.

3 Textile Exchange, 2025. Based on sources listed in footnotes (1) and (2).

Recycled polyester
Production facts and figures

Standards

The main standards used for recycled polyester include the Global Recycled Standard (GRS), the Recycled Claim Standard (RCS),[1] and the SCS Recycled Content Standard.

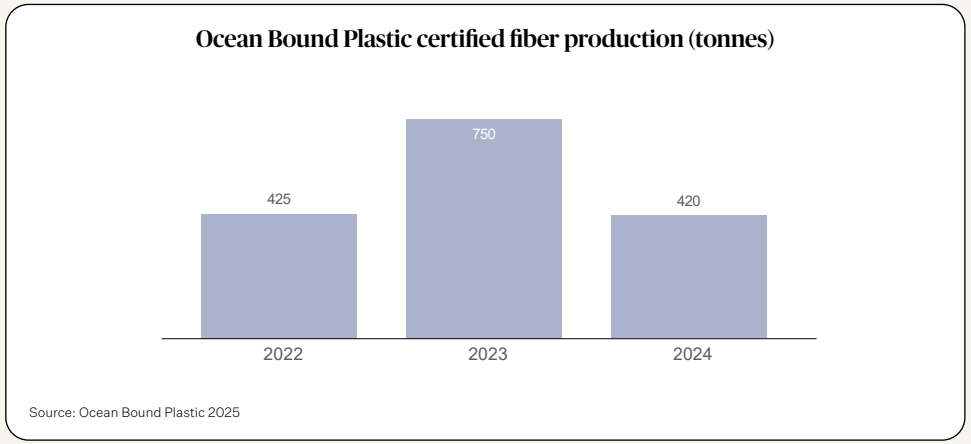
In December 2024, Zero Discharge of Hazardous Chemicals (ZDHC) released its Recycled Polyester Guidelines V1.0, with the aim of transforming sustainable chemical management within the polyester recycling sector. This covered both mechanical and chemical recycling processes. The guidelines provide recycled polyester suppliers with a harmonized framework for monitoring input feedstock, chemical usage, chemical recovery, and the environmental outputs, including wastewater, sludge, and air emissions.

Ocean-bound plastic

More than 11 million tonnes of plastic end up in the oceans every year.[2] An increasing number of initiatives are working on the collection of ocean-bound or ocean plastic[3] as feedstock for recycled polyester. Zero Plastic Oceans launched the Ocean Bound Plastic (OBP) Certification in 2020 in collaboration with the certification body Control Union. It is designed to encourage the removal of ocean-bound plastic from the environment by adding value to the effective collection and treatment of plastic before it reaches the ocean.

A total of 420 tonnes of recycled polyester fiber was OBP-certified in 2024, down from 750 tonnes in 2023. The decline is largely due to a buyer in Indonesia reducing the volumes it certified at fiber level. It's important to note that most recycled OBP is sold to non-certified buyers, meaning the final usage of OBP cannot be tracked precisely. The majority of OBP-certified recycled polyester fiber was produced in China in 2024, with small amounts also produced in Indonesia and India.

In addition to the 420 tonnes of OBP-certified fiber produced in 2024, 7,270 tonnes of reclaimed OBP-certified feedstock was also produced, originating from Malaysia, Indonesia, Thailand, India, China, Pakistan, Australia, New Zealand, the United States, Taiwan, Japan, the People's Republic of Korea (South), and the Netherlands.[4]



Source: Ocean Bound Plastic 2025

Photo: Will Matsuda

1 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

2 UNEP, 2021. *From Pollution to Solution a Global Assessment of Marine Litter and Plastic Pollution*.

3 Ocean-bound plastic is generally defined as abandoned plastic waste located within 50km from shores where waste management is inexistent or inefficient. Source: Ocean Bound Plastic (OBP) Certification, 2025.

4 Zero Plastic Oceans. Email correspondence, March 2025.

Biobased and CO_2-based polyester

Emerging materials

All synthetic fibers can, in theory, be made from new virgin fossil-based feedstocks, recycled feedstocks, biobased feedstocks, or CO_2-based feedstocks. Biobased and, more recently, CO_2-based feedstocks are emerging materials of growing interest.

Biobased polyester

The market share of biobased polyester is estimated at around 0.01% of the total polyester production.[1]

Many biosynthetic materials that exist on the market today are partially biobased. Further development of feedstocks is needed to provide the industry with innovative solutions to drive the uptake of biobased polyesters.

While many sustainability standards for biobased feedstocks exist, the scale and adoption of these standards for biosynthetics are still limited. Key standards for biomass certification are the Roundtable on Sustainable Biomaterials (RSB), International Sustainability & Carbon Certification (ISCC) Plus, and Bonsucro.

CO_2-based fibers

A few companies are exploring innovative approaches to directly capture carbon dioxide (CO_2) from the air and use the carbon element as feedstock for textiles. The carbon can be processed into the chemical building blocks that are used in the production of synthetic fibers such as polyester. Carbon Capture and Utilization and Storage (CCUS) and Direct Air Capture (DAC) are new technologies in development. Their energy usage is currently very high, but if technological challenges are overcome and the process is powered by renewable energy, it will have potential as an alternative to new virgin fossil feedstock. Solutions in development today are partially derived from captured carbon.

For more information on biobased and CO_2-based polyester, please see Textile Exchange's 2022 report *Sustainability of Biosynthetics report* and its 2024 report *The Future of Synthetics*.

Photo: Priyadarshini Ravichandran

1 Estimate based on nova-Institute, 2025. *Bio-based Building Blocks and Polymers: Global Capacities, Production and Trends 2024 – 2029* and Maia Research, 2025. *Global Polyester Fiber Market Report 2025*. Commissioned report.

The global fiber market

Polyamide (nylon)

Recycled polyamide (nylon)
Production facts and figures

Global polyamide (nylon) fiber production increased from 6.7 million tonnes in 2023 to 7.0 million tonnes in 2024, and accounted for about 5% of global fiber production.[1] There has been a steady increase in polyamide production over the last five years.[2]

The recycled polyamide fiber market is also growing, but at a slow rate. Around 0.2 million tonnes of recycled polyamide were produced globally in 2024. Due to technical challenges, limitations related to feedstock quality and availability, and investment needs, the market share of recycled polyamide is still very low, accounting for around 2.3% of all polyamide fiber production in 2024.[3]

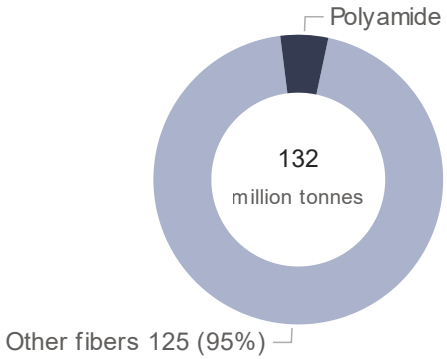
Feedstock types

Recycled polyamide can be produced from pre- or post-consumer waste. Pre-consumer waste may include processing scraps, fabric cut-offs, or hard polyamide waste. Post-consumer polyamide is made from materials such as discarded fishing nets, carpets, or other used textiles. The recycling process can be mechanical or chemical.

Standards

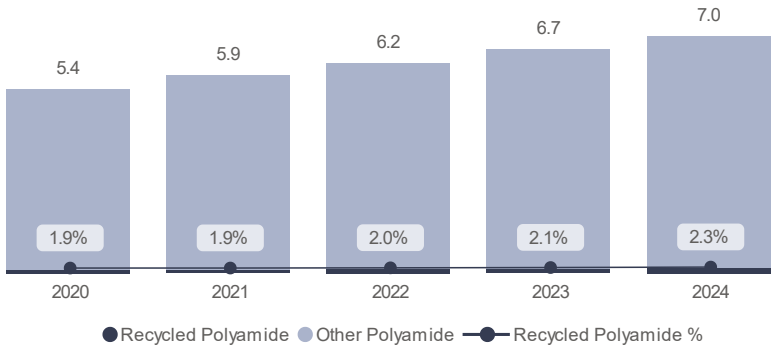
The main standards used for recycled polyamide include the Global Recycled Standard (GRS) and the Recycled Claim Standard (RCS).[4] Recycling polyamide helps decrease the industry's dependence on new virgin fossil-based raw materials and reduce waste material.

Global market share of polyamide (nylon) in 2024 (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilations.

Global polyamide (nylon) production (million tonnes) and share of recycled (%)



Source: Textile Exchange based on Maia Research 2025 and global data compilations.

1 Textile Exchange estimate based on various sources (see global fiber market chapter).

2 Maia Research, 2025. *Global Polyamide Fiber Market Report 2025*. Commissioned report.

3 Maia Research, 2025. *Global Recycled Nylon Fiber Market Report 2025*. Commissioned report.

4 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Biobased polyamide (nylon)

Introduction and supplier innovation landscape

The global production volume for biobased polyamide (nylon) fiber is around 0.03 million tonnes.[1] It is estimated that biobased polyamide fibers make up around 0.4% of the polyamide fiber market.[1]

Many biosynthetic materials that exist on the market today are partially biobased. Further development of feedstocks is needed to provide the industry with innovative solutions to drive the uptake of biobased polyamides.

For more information, please see Textile Exchange's 2022 report *Sustainability of Biosynthetics Report* and its 2024 report *The Future of Synthetics*.

Photo: Shutterstock

1 Estimate based on nova-Institute, 2025. *Bio-based Building Blocks and Polymers: Global Capacities, Production and Trends 2024 – 2029* and Maia Research, 2025. *Global Polyester Fiber Market Report 2025*. Commissioned report.

The global fiber market

Other synthetic fibers

Other synthetic fibers
Production facts and figures

Other synthetics—including polypropylene, acrylic, and elastane—had a combined production volume of 6 million tonnes and a market share of around 5% of the global fiber market in 2024.

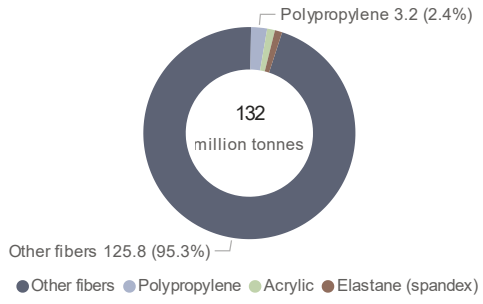
Polypropylene had a market share of 2.4%, with fiber production volumes reaching 3.2 million tonnes. The market share of recycled polypropylene fibers was estimated to be around 0.4% of global polypropylene production in 2024.[1]

Acrylic fibers had a production volume of just under 1.6 million tonnes and accounted for 1.2% of the global fiber market in 2024. Global acrylic fiber production volumes have been declining over the years. The market share of recycled acrylic was estimated to be 0.8% of total acrylic fiber production in 2024.[1]

Elastane fiber production increased from almost 1.4 million tonnes in 2023 to just under 1.5 million tonnes in 2024 and continued to account for around 1.1% of the global fiber market. The share of recycled elastane was estimated to be 3.2% of global elastane fiber production in 2024.[1]

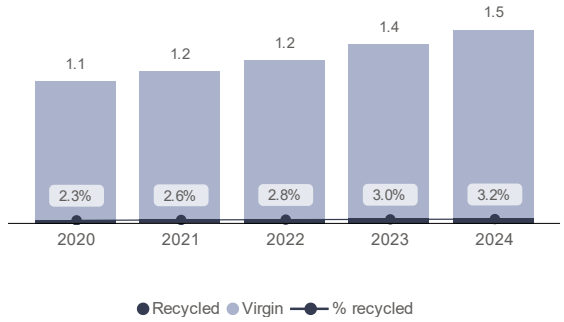
The production volumes of other synthetics, such as polytrimethylene terephthalate (PTT), polylactic acid (PLA), and similar materials, are very low and are not currently included in this report.

Global market share of other synthetics 2024 (million tonnes)



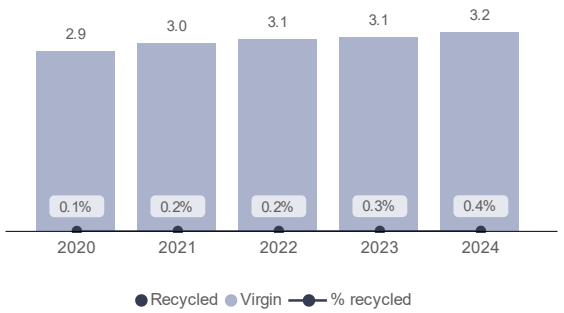
Source: Textile Exchange based on Maia Research 2025 and global data compilation.

Elastane fiber production (million tonnes)



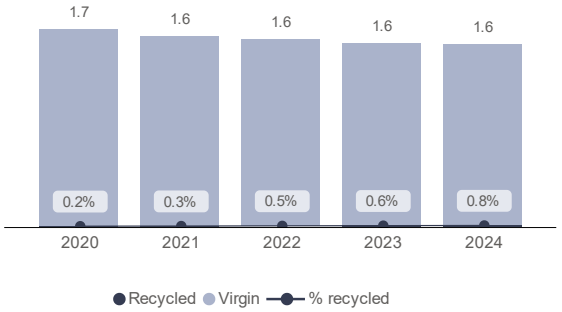
Source: Textile Exchange based on Maia Research 2025 and global data compilation.

Polypropylene fiber production (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

Acrylic fiber production (million tonnes)



Source: Textile Exchange based on Maia Research 2025 and global data compilation.

1 Maia Research, 2025. *Global Other Synthetics Fiber Market Report 2025*. Commissioned report.

Other raw materials (non-fiber)

Other raw materials (non-fiber)

Down and feathers

Virgin down
Production facts and figures

Global virgin down and feather production increased from around 626,931 tonnes in 2023 to around 659,073 tonnes in 2024.[1] Approximately 85-90% of down comes from ducks, with the remainder mainly from geese.

Concerns about the treatment of animals have led to the development of animal welfare standards for down. Key standards include the Responsible Down Standard (RDS)[2] and DOWNPASS.[3] These standards ensure that there is:

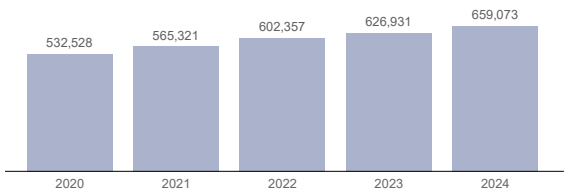
- No live plucking
- No force-feeding
- Broader animal welfare (depending on the standard)

Multi-tier cage farming, increasingly used in China for ducks, is prohibited by the RDS, as the animal welfare outcomes it describes cannot be delivered by these systems.

RDS-certified down production decreased slightly, from 20,638 tonnes in 2023 to 19,595 tonnes in 2024. This is largely due to a decline in the number of certified birds in China, where the majority of RDS-certified down is produced. Other countries producing RDS-certified down include Poland, Vietnam, Hungary, the United Kingdom, the United States, Taiwan, Ukraine, Canada, Germany, France, and Denmark. Globally, RDS accounted for 3% of total virgin down production in 2024.

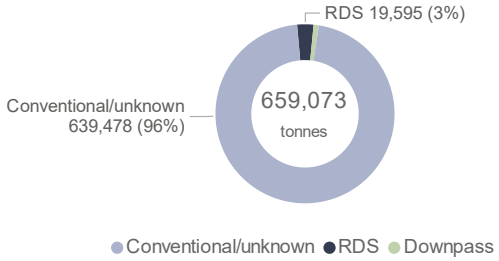
DOWNPASS: Due to the war in Ukraine and the revision of the DOWNPASS standard, information on the exact volumes of audited down and feathers used as filling material in 2024 is currently not available. As a rough guide, based on the bedding produced and labelled as well as feedback from audit organizations, it is estimated that approximately 6,435 tonnes of DOWNPASS audited down and feathers were produced in 2024.[4] No data or approximations are available for 2022 or 2023. In 2021, 6,958 tonnes of DOWNPASS-certified down was produced globally.

Global virgin down production (tonnes)



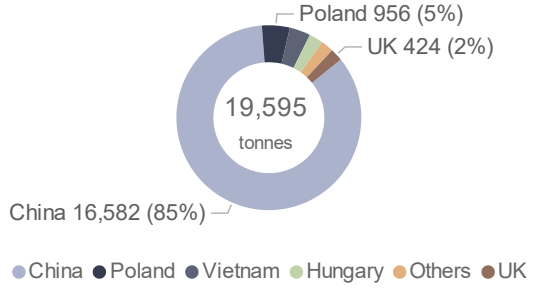
Source: Textile Exchange based on Maia Research 2025.

Market share of down programs in 2024 (tonnes and %)



Source: Textile Exchange based on Maia Research 2025 and standard owners.

Responsible Down Standard certified down by country 2024 (tonnes)



Source: Textile Exchange

1 Maia Research, 2025. *Global Down and Feather Market Report 2025*. Commissioned report.

2 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

3 The Global Traceable Down Standard (TDS) was withdrawn in 2020 and is therefore no longer covered in this report.

4 DOWNPASS. Email correspondence, May 2025.

Recycled down
Production facts and figures

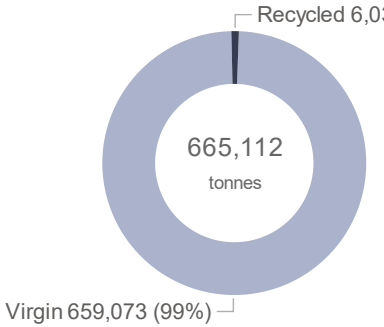
While global virgin down production was around 659,073 tonnes in 2024, the production of recycled down was estimated to be around 6,039 tonnes.[1]

This represents a slight increase in the volume of recycled down compared to 2023, when an estimated 5,798 tonnes were produced but, considering the increase in total down production, the market share of recycled down remains around 1%.

Key standards

Key standards used for recycled down include the Recycled Claim Standard (RCS) and the Global Recycled Standard (GRS).[2]

Recycled down market share in 2024 (tonnes)



Source: Textile Exchange based on Maia Research 2025.

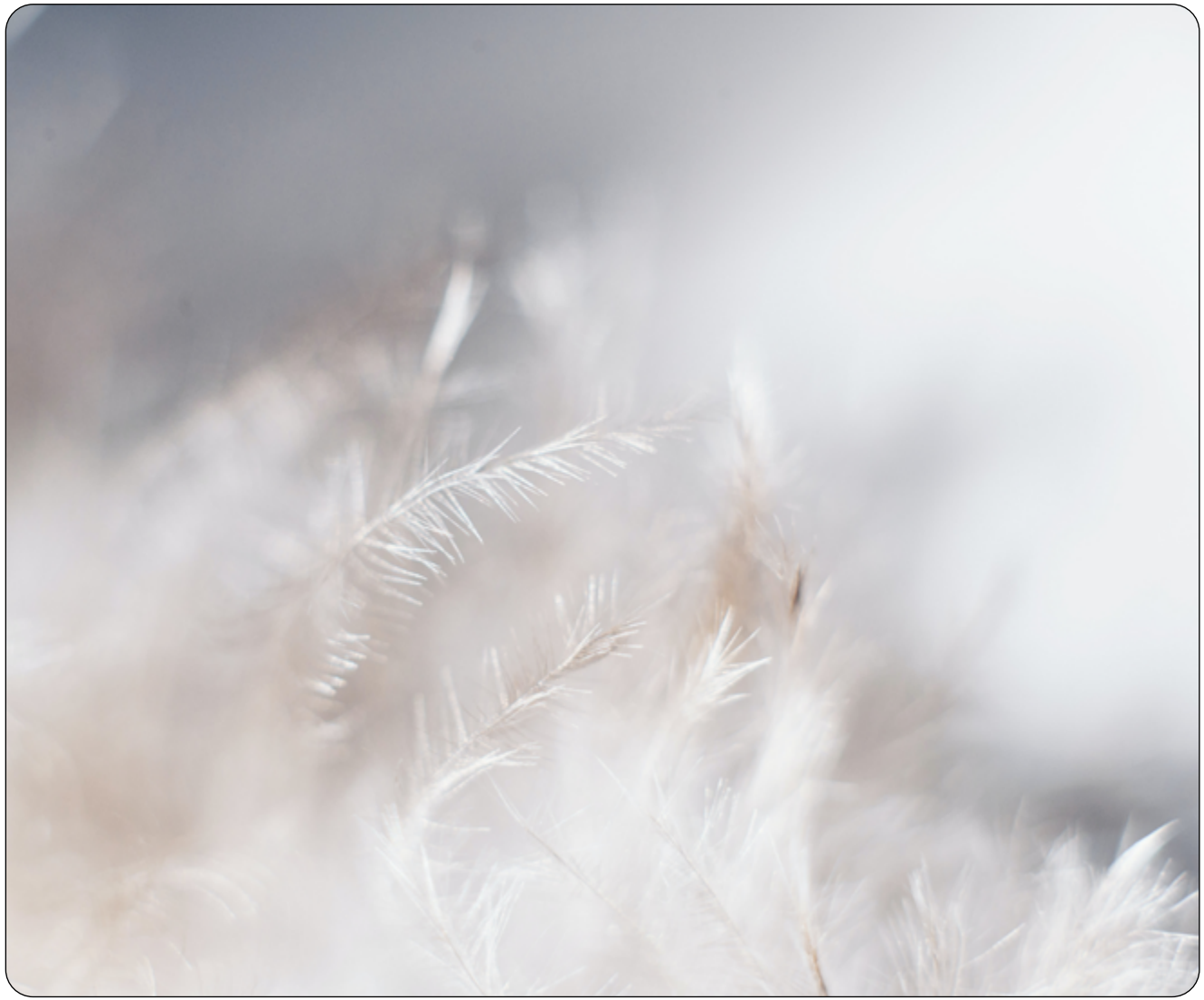


Photo: Evie S / Unsplash

1 Maia Research, 2025. *Global Down and Feather Market Report 2025*. Commissioned report.

2 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Other raw materials (non-fiber)

Leather

Raw hides
A global overview

Global production of raw hides was estimated to be 13.8 million tonnes in 2024, from an estimated 1.6 billion animals.[1,2]

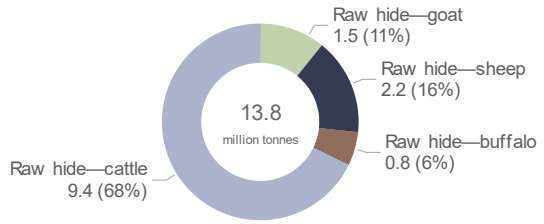
Cattle hides were the most common type of hide, with an estimated 9.4 million tonnes produced in 2024, accounting for over two-thirds of total hide production. China was the largest producer of cattle hides, accounting for 16% of global production, followed by the United States and Brazil, each accounting for 12%, India for 7%, and Argentina for 6%.[1,3]

Sheep hides were the second most common type of hide, with production totaling around 2.2 million tonnes. The largest producer was China, which accounted for 29% of global sheep hide production, followed by Australia, which accounted for 9%, and India for 8%.[1]

Around 1.5 million tonnes of **goat hides** were produced in 2024, with the largest producers being China at 34% of global goat hide production, India at 20%, and Pakistan at 9%.[1]

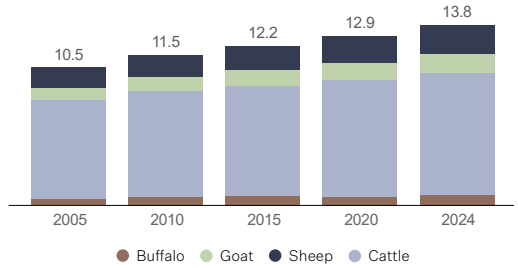
An estimated 0.8 million tonnes of **buffalo hides** were also produced, with the largest producers being India at 38%, China at 28%, and Pakistan at 21% of global buffalo hide production.[1,3]

Global hides production by type in 2024 (million tonnes)



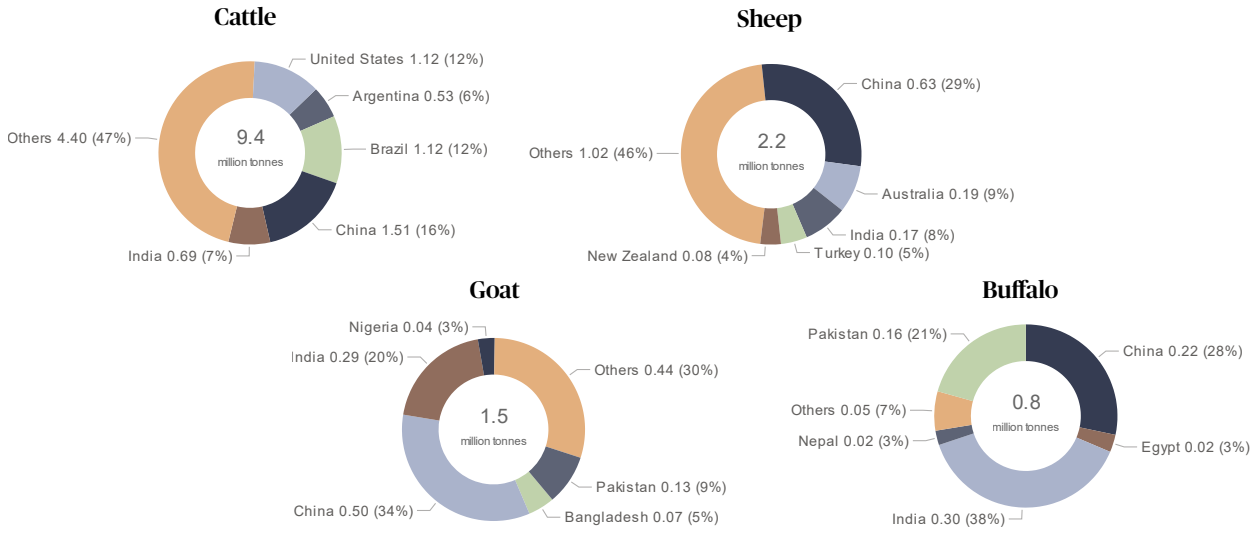
Source: Textile Exchange based on FAOSTAT. 2023 data is used as proxy for 2024.

Global hides production (in million tonnes)



Source: Textile Exchange based on FAOSTAT. 2023 data is used as proxy for 2024.

Raw hides by country in 2024 (million tonnes)



Source: Textile Exchange based on FAOSTAT. 2023 data is used as proxy for 2024.

1 FAOSTAT, 2025. Database. Accessed June 2025. 2023 data is used as a proxy for 2024, as 2024 data was not available at the time of reporting. FAO's hide and skin production volumes for big animals are calculated based on meat production (carcass weight) using conversion factors.

2 Includes raw cattle hides, buffalo hides, goat skins, and sheep skins. Other types of hides and skins are not included.

3 In 2023, FAOSTAT's cattle and buffalo meat production data (and therefore also its hide and skin data) was revised to include all cattle under buffalo for India. Textile Exchange has applied the percentage breakdown between India's cattle and buffalo production from 2021 as a proxy.

Raw hides
Standards and certification systems

Adopting standards and certification systems helps the leather industry ensure compliance with relevant criteria and acknowledge good industry practice.

Different standards and certification systems differ widely in their requirements, approach to assurance—ranging from self-declaration to third-party audits—and the degree of traceability and oversight throughout the supply chain. Some operate only in specific regions or markets, while others focus on particular impact areas.

For leather, most standards cover the processing stage. While multiple standards cover animal welfare for meat production, only a few small supply chains currently manage to maintain traceability of the hides of certified animals through to finished leather goods. Beyond animal welfare concerns, brands need to know whether leather originates from land where deforestation or conversion of other natural ecosystems takes place—highlighting the necessity for joined-up and certified supply chains.

A Greener World (AGW), which is active in the United States, Canada, the United Kingdom, Ireland, Portugal, Australia, Ecuador, and France, has four certifications that are used to certify animals producing meat and/or raw hides for leather. These certifications include Certified Animal Welfare Approved by AGW, Certified Grassfed by AGW, Certified Non-GMO by AGW, and Certified Regenerative by AGW. Production volume data isn't currently available.

BEHUMANE provides blued hides, finished leather, and leather goods sourced from ranches that have third-party verified regenerative agriculture and animal welfare programs, with a fully traceable supply chain and outcome measurement. All ranchers working with BEHUMANE are Global Animal Partnership (G.A.P) certified. Production volume data isn't currently available.

Beter Leven, with its Better Life label, was developed by the Dutch Society for the Protection of Animals (SPA) and uses a star rating system to indicate the living conditions of the animals behind its products. In 2024, the number of certified beef cattle was estimated to be 27,000, with the number of certified calves estimated to be around 7,000. Volume data on certified hides was not available.[1]

Certified Humane® aims to improve the lives of farm animals from birth through slaughter. Certified Humane® hides are currently being used in leather production, but since some parts of the supply chain could not be audited, the Certified Humane® logo is not yet being used on final products.

Global Animal Partnership (G.A.P.)'s Animal Welfare Certified program ensures that animals are raised without the use of animal by-products and that their environment mimics their natural environment to varying degrees as specified on the label. The first companies have started using traceable hides from G.A.P.'s Animal Welfare Certified animals. There are currently G.A.P.-certified cattle in the United States, Australia, and New Zealand, and sheep in Australia and New Zealand. There is also some production in Uruguay and Chile.

Land to Market™ is an outcomes-based verified regenerative sourcing solution for raw materials, including leather and wool. Animals are currently certified under Land to Market™, but no data was available at the time of reporting.

Photo: Evie S / Unsplash

1 2024 data on the number of Beter Leven-certified animals was unavailable at the time of reporting, so 2023 data is used as a proxy.

Raw hides
Standards and certification systems

Pasture for Life is a farm-level certification that guarantees an animal has been raised exclusively on pasture throughout its life. In 2024, 16,400 cattle were under Pasture for Life management.[1] Of these, 370 Pasture for Life certified cattle (approximately 13 tonnes of rawhide) were used to produce leather.[2]

Responsible Animal Fiber (RAF)[3] is a framework used by Textile Exchange to cover standards that address animal fibers, including the Responsible Wool Standard (RWS), the Responsible Mohair Standard (RMS), and the Responsible Alpaca Standard (RAS). The most recent versions of the RAF standards all include an optional module covering slaughter. When this module is applied and the chain of custody is maintained, claims about the origin of animal skin and leather can be made.

SBCert is a certification body based in Brazil, which also operates in the United States, Mexico, Argentina, Chile, Norway, and the Netherlands. They have their own animal welfare standard and are also responsible for auditing the PRIMI traceability protocol, which monitors the traceability of over 200,000 cattle from birth to slaughter across eight Brazilian states.

Photo: Carl Van der Linde

1 Pasture for Life. Email correspondence, April 2025.

2 British Pasture Leather. Email correspondence, April 2025. British Pasture Leather is the first and only producer of leather from the hides of cattle certified by Pasture for Life. The cattle are raised on regenerative farms in the UK.

3 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Recycled leather fiber
Overview

Using recycled leather and recycled leather fiber can play a key role in curbing the industry's waste output. Recycled leather is where the fiber structure remains intact during the recycling process. Recycled leather fiber is produced by disintegrating the leather into fibrous particles, small pieces, or powders, then forming sheets, with or without chemical binding agents. It must contain at least 50% in weight of dry leather fibers.

Recycled leather fiber materials are mainly made from pre-consumer production scraps, consisting of recycled leather fibers and binders, or recycled leather fibers attached to the surface of a synthetic material.

The European Outdoor Group (EOG) published a Recycled Leather report in 2019 to support industry professionals in better understanding recycled leather fibers.

Recycled standards

The standards that can certify recycled leather feedstocks are the Recycled Claim Standard (RCS) and the Global Recycled Standard (GRS).[1] In November 2023, the RCS and GRS were updated to allow shavings/trimmings from leather tanning, splitting, post-tanning, and finishing operations to be accepted as reclaimed inputs.

Photo: Soumen Ray / Shutterstock

1 Textile Exchange is harmonizing its standards system and will transition to the Materials Matter System, scheduled to take effect in 2026. You can learn more here.

Other raw materials (non-fiber)

Natural rubber

Natural rubber

Global natural rubber production was estimated to be just under 15 million tonnes in 2024.[1,2]

The largest natural rubber-producing countries were Thailand (32% of global production), Indonesia (18%), and Cote d'Ivoire (10%).1 It is estimated that around 85% of natural rubber is produced by smallholders, involving around 10 million farmers globally.[3]

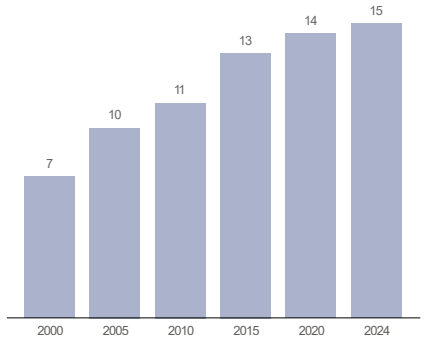
The market share of rubber forest covered by the Forest Stewardship Council (FSC) (FSC) and the Programme for the Endorsement of Forest Certification (PEFC) increased from around 2.9% in 2023 to 3.2% in 2024.[1,4,5]

Around 0.3 million hectares of rubber forest (out of a total 13.6 million hectares) produced rubber covered by FSC, representing a market share of around 2%.[1,4]

Around 0.1 million hectares of rubber forest produced rubber covered by PEFC, representing a market share of around 1%.[1] The first rubber covered by PEFC was made available in 2021.[5]

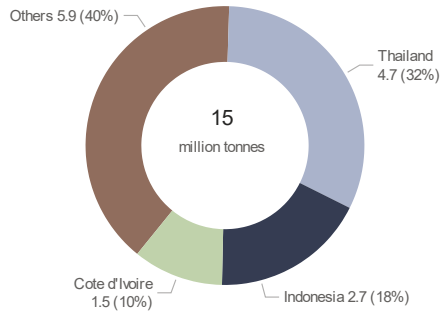
FSC and PEFC are founding members of the Global Platform for Sustainable Natural Rubber (GPSNR).

Global natural rubber production (in million tonnes)



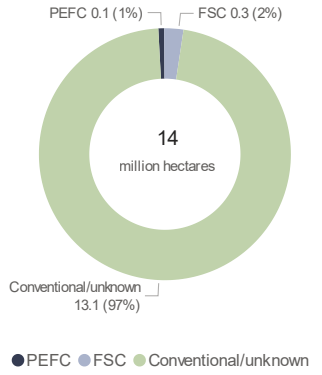
Source: Textile Exchange based on FAO (2023 data used as proxy for 2024).

Global natural rubber production by country in 2024 (million tonnes)



Source: Textile Exchange based on FAO (2023 data used as proxy for 2024).

Global rubber forest area by program in 2024 (million hectares)



Source: Textile Exchange based on FSC, PEFC, and FAO (2023 data used as proxy for 2024).

1 FAOSTAT, 2025. Database. Accessed June 2025. 2024 data not available at the time of reporting, so 2023 data has therefore been used as a proxy.

2 Natural rubber accounts for approximately half of global rubber production, the other half being synthetic. Statista, 2023. *Synthetic rubber global production 2000-2022* and IRSG, 2023. *IRS Group Release Latest Industry Outlook*.

3 FSC, 2019. *Responsible Sourcing of Natural Rubber*.

4 FSC, 2025. Email correspondence, April 2025. Please note that figures reported for FSC include both certified and controlled volumes.

5 PEFC, 2025. Email correspondence, April 2025. Please note that figures reported for PEFC include both certified and controlled volumes.

Methodology and disclaimer

Methodology and disclaimer

Key information shared in the report

The *Materials Market Report* contains (1) global production volumes of various fibers and materials, and (2) program-specific data such as production volumes per program.

Textile Exchange has collected, analyzed, and compiled this information in all good conscience and cross-checked the data and information wherever possible. A guarantee for all the information is not given. This report is intended for general guidance and information purposes only. It is not the report's intention to be used or considered as advice or recommendation in any direction.

1. Global production volumes

The compilation of global market data is challenging. The collection of primary data from the suppliers is beyond what is possible within the scope of this report, so we rely on secondary data from industry associations, international organizations, governmental organizations, standard setters, and research institutes. We do our best to provide an accurate and reliable picture of the market, but data gaps and inconsistencies are very common for global market data, and modeling must be applied for some data. Specific data sources are directly mentioned on individual pages.

a) Data quality checks and triangulation

Textile Exchange tried to identify the most reliable sources for each fiber category and conducted triangulations with at least two to three sources wherever possible. In general, all global market data are rounded estimates.

b) Production volume scope

The production data in this report covers the total volumes of fibers produced, not differentiating between different uses, and are thus not specific to the apparel industry. The fibers may be used for apparel, home textiles, technical textiles, or other applications.

Minority fibers such as PLA, PTT, and protein fibers are not included.

c) Definition of fiber and materials

The term fiber in this report includes staple fiber and filament. All numbers for manmade cellulosic fibers and synthetics include staple fiber and filament production volumes. The term materials includes fibers and other raw materials such as leather, down, and rubber. Aggregate data on global fiber production does not include leather, down, or rubber. For flax, the term fiber includes both short and long staple fibers.

d) Allocation of years

This report shares data based on the calendar year. Some data sources collect data on a seasonal basis. Cotton production volumes are collected according to the harvest year used by International Cotton Advisory Committee (ICAC), running from August 1 to July 31, spanning two calendar years. This report allocates cotton production to the latter of these two calendar years. For example, cotton harvested between August 1, 2023, and July 31, 2024, is allocated to the 2024 calendar year.

The exception to this rule is total virgin cotton data for Brazil, which is collected by calendar year rather than harvest year and, in alignment with the methodology of ICAC (revised in 2023 to align with the U.S Department of Agriculture (USDA)'s revised methodology for Brazil), reflects production from the earlier calendar year. This means that, for example, this year's *Materials Market Report* covers cotton produced in Brazil in 2023, since this is allocated to 2023/24 by ICAC and the USDA.

NOTE: This is only the case for total virgin cotton data for Brazil.

While in general we align with ICAC's reporting year, to align with the global Better Cotton volumes for 2023/24 reported by Better Cotton, the volumes reported for ABR (a Better Cotton equivalent) cotton grown in Brazil are based on Brazil's National Supply Company's (CONAB) reporting cycle. They cover cotton grown in the 2024 calendar year, whereas total cotton figures for Brazil included in this report follow the approach taken by ICAC and cover cotton grown in the 2023 calendar year.

Where applicable, the International Wool Textile Organisation (IWTO) applies a similar approach for wool as ICAC takes for cotton (for example, 2023/24 wool production volumes are allocated to the 2024 calendar year). However, 2024 (2023/24) IWTO data was not available at the time of reporting, and 2023 (2022/23) volumes have therefore been used as a proxy in this report.

e) Modeling

To close data gaps, modeling, as well as assumptions and inferences, are used. For example, country average yields may be applied instead of program-specific yields, or seed cotton volumes may be used to estimate fiber volumes. Where data for a specific year is missing, the previous year's data is used as a proxy.

Methodology and disclaimer

f) Fiber-specific methodologies

Recycled cotton, wool, and down: As ICAC's cotton data, IWTO's wool data, and Maia Research's down data refer to virgin production volumes, the recycled cotton, wool, and down production volumes were added on top. The total production volumes for cotton, wool, and down are thus higher than the volumes reported by ICAC, IWTO, and Maia Research, respectively.

Recycled manmade fibers: In contrast, the total synthetic fiber production volumes reported by Maia Research, The European Man-Made Fibres Association (CIRFS), and The German Association of Chemical Fiber Manufacturers (IVC) include the recycled share. Recycled manmade cellulosic fibers are also assumed to be included in the total manmade cellulosic fiber production as reported by Maia Research, CIRFS, and IVC.

Organic cotton: For organic cotton, we collect and report data from governmental sources wherever possible. For countries without available governmental data, we collect and report data from organic cotton producers, gins, certification bodies, and other sources. However, due to data gaps, modeling and proxies are used, which may result in incomplete data.

g) Geographic classification

Textile Exchange is currently updating its geographic classification document to reflect recent changes. As this is a comprehensive and ongoing review, the existing geographic classifications are being used in this report and in all related databases, files, and communications to maintain consistency throughout.

2. Program specific data

Program-specific data, such as production volumes, is based on publicly available information and/or information collected from the programs and initiatives. While overlaps between programs are excluded where possible, some overlap may remain between the production volumes reported for different programs.

Methodological changes, data revision, and comparison to previous years

Textile Exchange continuously improves its data collection and analysis. Some data reported in previous years has been revised or updated as actual data has become available for initial estimates, or the methodology has been improved. A simple comparison between previously reported numbers and data reported this year may not reflect the actual change over time due to these updates. The latest data for the reporting period and previous years is always published in the latest report.

Key revisions from the 2024 to the 2025 Materials Market Report

The following methodological changes were applied in compiling this report:

- Backward-adjusted data was provided for the following programs and updated accordingly: certified forest areas, Cotton made in Africa®, Masters of FLAX FIBRE™, Forest Stewardship Council (FSC) rubber, organic cotton, Programme for the Endorsement of Forest Certification (PEFC) rubber, regenagri, and the SustainaWOOL Integrity Scheme (now the Australian Wool Sustainability Scheme). As a result, the overall share of production covered by these programs out of their respective fiber total may have changed from what was previously reported.
- International Cotton Advisory Committee (ICAC) cotton statistics were updated, resulting in revisions to previously reported cotton production volumes.
- Food and Agriculture Organization (FAO) statistics were updated for other plant-based fibers, rubber, raw hides, and the number of animals, leading to revisions in previously reported global production volumes for these fibers/materials.
- Total production volumes of synthetics (including recycled polyester), MMCFs, and down were updated.
- As a result of the fiber-specific revisions listed above, historic global fiber production volumes have been updated and may differ from those previously reported.

Acknowledgements

Acknowledgements

We would like to extend our sincere gratitude to all who have contributed data and expertise to this report. Without this valuable cooperation and support, this report would not have been possible. Textile Exchange discontinued disclosing the names of specific companies as well as the report production team for data protection and privacy reasons. Data sources deemed to be public are listed on the relevant pages. Please see the methodology section for further information.

Photo: Alejandra Orosco