Weekly Publication of



Cotton

of India

COTTON STATISTICS & NE Edited & Published by Amar Singh Association

2022-23 • No. 20 • 16th August, 2022 Published every Tuesday

Cotton Exchange Building, 2nd Floor, Cotton Green, Mumbai - 400 033 Telephone: 8657442944/45/46/47/48 Email: cai@caionline.in www.caionline.in

Installed Rotors Growing Faster Than Spindles: **ITMF Machinery Shipment Statistics Indicate Greater Spinning Efficiency**

With a Ph.D. in Agricultural and Resource Economics from Oregon State University in the USA, Dr. Terry Townsend is a consultant on commodity issues. He is currently

working on a project funded by The

World Bank to develop market information systems for rice growers in Assam and apple produces in Himachal Pradesh.

He was a cotton analyst with USDA in the 1980s. He moved to the International Cotton Advisory Committee in



Dr. Terry Townsend Dr. Olivier Zieschank **Cotton Analytics**

1987 and served as Statistician for 12 years. He was promoted to Executive Director in 1999 and retired at the end of 2013. He remains active in several organisations related to cotton and natural fibres, including the Discover Natural Fibres Initiative (www.DNFI.org).

The International Textile Manufacturers Federation (ITMF) recently released its 44th annual report, International Textile Machinery Shipment Statistics (Vol 44/2021), covering shipments during 2021. The statistics are compiled from data provided by over 200 manufacturers

Born in Lausanne, Switzerland, Dr. Olivier Zieschank studied Management at the university of Lausanne where he graduated in 2005. Until

> 2010 he worked in a Swiss based company specialising in negotiating



Director, ITMF

optimising and cell tower lease agreements. *He became associate* director while his role quickly expanded into every aspect of running a small company on a tight budget.

In 2010, he returned to university and studied economics

in Neuchatel, Switzerland. He wrote his PHD in economics at the university of Freiberg, Germany, in which he developed a process theory of organisation. He was appointed Economist at the ITMF in August 2017. As of January 2021, Dr. Zieschank has been Director, ITMF.

of spinning, drawtexturing, weaving, knitting and finishing machinery. Shipments include machinery produced by firms participating in the survey for both domestic and export destinations and physically shipped during the year indicated.

This report is unique in that it represents a physical enumeration of shipments, rather than estimates or extrapolations, as is the case with most other statistical reports in the cotton industry. The report is also remarkable for its timeliness, having been issued just 6 months following the end of the latest reporting year. In contrast, as of this writing, BCI and Cotton Made in Africa just recently published partial statistics for operations in 2020, and the Textile Exchange has so far only published statistics for organic cotton through 2019/20.

The ITMF machinery shipments report is remarkable for the near universal participation in the survey by manufacturers, making the report highly valuable as an analytical tool for insights into the future of fibre mill use. ITMF also publishes the International Textile Industry Statistics; a report which presents data on the productive capacity of spindles, rotors, air-jets, shuttle and shuttle-less looms and raw materials consumption of cotton and man-made fibres in the short-staple organised (spinning mill) sector of the textile industries in virtually all textile-producing countries in the world.

While the statistics on shipments and installed capacities within each of the market segments are interesting, the statistics on rotors and short-staple spindles have the greatest relevance to the cotton industry. The purchase of spinning equipment presages cotton spinning activity. Not all rotors and spindles are the same; different designs and different construction and material standards result in different levels of efficiency and operating rates. Nevertheless, a study of the spinning machinery shipment data gives an indication of where cotton mill use will grow or shrink in the next several seasons.

Overview

World spinning capacity in 2020 consisted of 7 million rotors and 220 million short-staple spindles, for a total of about 259 million spindle equivalents (calculated assuming each rotor is equivalent to 5.25 spindles).

World cotton mill use in 2020/21 was 25.7 million tonnes. (International Cotton Advisory Committee, July 2022). World synthetic staple fibre production in 2020 totaled 23.1 million tonnes (CIRFS, published in IWTO Market Information Report Edition 16). Thus, total short-staple fibre mill use in 2020 was about 49 million tonnes, indicating that average fibre mill use per spindle equivalent was close to 190 kilograms per year.

In 2013, world cotton and synthetic staple fibre mill use was approximately 45.1 million tons, and installed spinning capacity was approximately 275 million spindle equivalents. Therefore, average fibre use per spindle equivalent was between 160 and 170 kilograms per year. in just eight years, the world spinning industry has improved productivity by some 20 kilograms per spindle equivalent.

World spinning capacity rose from 275 million spindle equivalents in 2013 to 280 million in 2018, but then fell to 268 million in 2020. The overall decline of 6 million spindle equivalents between 2013 and 2020 represented the scraping of obsolete equipment that occurred primarily in Asia and South America. Declines in capacity also occurred in Eastern and Western Europe. Capacities increased in Turkey and North America between 2018 and 2020.

Shipments in 2021 included 695,000 rotors and 7.6 million spindles, for a total of 11.3 million

	2013		2018		2020		Change		
	SE	% World	SE	SE % World		% World	2013-2018	2018-2020	
Asia/Oceania	237'186'638	86%	242'129'045	86%	230'341'935	86%	4'942'408	-11'787'110	
Turkey	10'880'000	4%	12'630'000	5%	12'962'000	5%	1'750'000	332'000	
Africa	4'090'231	1%	4'694'675	2%	4'443'325	2%	604'445	-251'350	
N America	6'019'967	2%	6'496'175	2%	6'664'180	2%	476'209	168'005	
S America	11'429'226	4%	10'212'225	4%	10'106'175	4%	-1'217'001	-106'050	
W Europe	1'908'245	1%	1'760'650	1%	1'704'275	1%	-147'595	-56'375	
E Europe	3'098'244	1%	2'367'300	1%	2'042'600	1%	-730'944	-324'700	
World	274'612'550	100%	280'290'070	100%	268'264'490	100%	5'677'520	-12'025'580	

Table 1: World installed capacities (2013, 2018, 2020, spindle equivalence)

Source: ITMF, International Textile Industry Statistics (ITIS-63-2020)

	Rotors	Short-Staple spindles	SE	% World
Asia/Oceania	580'180	6'848'718	9'894'663	87.9%
Turkey	61'144	451'400	772'406	6.9%
Africa	288	56'172	57'684	0.5%
N America	12'600	161'600	227'750	2.0%
S America	29'312	70'874	224'762	2.0%
W Europe	9'032	22'332	69'750	0.6%
E Europe	1'680	2'880	11'700	0.1%
Other	500		2'625	0.0%
World	694'736	7'613'976	11'261'340	100%

Table 2: World shipment (2021, number of units and spindle equivalence)

Source: ITMF, International Textile Machinery Shipment Statistics (ITMSS-64-2021)

spindle equivalents. 88% of 2021 shipments of rotors and spindles went to Asian destinations, 7% went to Turkey, and 5% went to the Rest of the World.

Shipments of rotors in 2021 represented 9.6% of installed rotor capacity in 2020, and 2021 shipments of spindles represented just 3.4% of 2020 installed spindle capacity. The share of rotors in total spindle equivalent capacity is rising. Rotors require less energy and labour per kilogram of yarn output than spindles, but by most metrics the quality of open-end yarn is less than ring spun yarn. The increase in shipments of rotors relative to spindles in 2021 implies that cost pressures are forcing mills to favour yarn production efficiency over yarn quality, and apparently consumers are accepting this tradeoff.

Asia and Turkey Dominate

China was the largest destination for rotors and short-staple spindles in 2021 by far, receiving 6.1 million spindle equivalents, or 54% of world rotor and short-staple spindle equivalents. India received 1.5 million spindle equivalents. Pakistan, Turkey, Uzbekistan, Bangladesh, Vietnam, and Brazil each received between 100,000 and one million spindle equivalents.

China's share of world installed short-staple spinning capacity in 2020 was 37%. Shipments of spinning equipment received by China in 2021 constituted a larger percentage of world shipments than China share of installed capacity in 2020. This suggests that China is becoming both more efficient and even larger in the world spinning industry.

Indian textile mills received shipments of about 40,000 rotors and more than 1 million shortstaple spindles in 2021, representing about 13% of world shipments of spinning equipment in spindle equivalence. Shipments of rotors by India in 2021 were just 5% of 2020 installed capacity, and shipments of spindles were just 2% of 2020 installed capacity. This suggests that India's share of world spinning capacity shrank in 2021. Shipments to spinning mills in Pakistan totalled 53,000 rotors in 2021 and 636,000 spindles. On a spindle-equivalent basis, 2021 shipments of spinning machinery to mills in Pakistan represented about 6% of 2020 installed capacity, and Pakistan had about 5% of the world's installed capacity in 2020. Shipment statistics in 2021 indicate that mill use in Pakistan is growing.

In contrast, the same calculations indicate that the rate of growth in mill use in Bangladesh is slowing. Shipments of rotors and short-staple spindles totalled 12,000 and 280,000, respectively in 2021, representing 3% of world spindle-equivalent shipments in 2021. Bangladesh accounted for 6% of world spinning capacity in 2020.

Shipments to Uzbekistan totalled 13,000 rotors and 380,000 spindles in 2021, representing about 4% of all shipments of spinning equipment in the world. Uzbekistan had 1.3% of world installed spinning capacity in 2020. The 2021 machinery shipment statistics indicate that spinning capacity in Uzbekistan is rising as a share of the world total.

Turkmenistan imported 33,000 spindle equivalents in 2021, suggesting that mill use in Central Asia will continue to rise.

Country	Installed capacities 2020	% World	Shipments 2021 % World		Country	Installed capacities 2020	% World	Shipments 2021	% World
China	99'079'900	36.9%	6'131'700	54.4%	Syria	641'950	0.2%	0	0.0%
India	60'367'000	22.5%	1'516'752	13.5%	Other Asia/Oceania	572'170	0.2%	3'574	0.0%
Pakistan	14'578'750	5.4%	917'981	8.2%	Turkey	12'962'000	4.8%	772'406	6.9%
Uzbekistan	4'528'250	1.7%	445'406	4.0%	Greece	181'525	0.1%	10'368	0.1%
Bangladesh	15'776'800	5.9%	341'008	3.0%	Spain	218'050	0.1%	11'466	0.1%
Vietnam	11'005'200	4.1%	278'074	2.5%	Germany	193'400	0.1%	1'980	0.0%
Malaysia	439'900	0.2%	85'176	0.8%	Bulgaria	246'000	0.1%	0	0.0%
Indonesia	11'185'950	4.2%	78'896	0.7%	Azerbaijan	146'650	0.1%	0	0.0%
Turkmenistan	1'234'500	0.5%	32'832	0.3%	Czech	138'900	0.1%	0	0.0%
Nepal	100'000	0.0%	21'600	0.2%	Moldova	206'450	0.1%	0	0.0%
Iran	2'881'250	1.1%	35'904	0.3%	Romania	102'500	0.0%	0	0.0%
Tajikistan	140'925	0.1%	0	0.0%	Ukraine	146'075	0.1%	0	0.0%
Thailand	4'172'800	1.6%	5'760	0.1%	Russia	407'500	0.2%	8'820	0.1%
Hong Kong	114'925	0.0%	0	0.0%	Italy	222'475	0.1%	6'174	0.1%
Taiwan	1'241'675	0.5%	0	0.0%	Austria	178'550	0.1%	0	0.0%
Japan	844'000	0.3%	0	0.0%	France	204'850	0.1%	0	0.0%
Korea	683'890	0.3%	0	0.0%	Portugal	318'750	0.1%	26'112	0.2%
Myanmar	258'400	0.1%	0	0.0%	Other Europe	835'200	0.3%	16'530	0.1%
Philippines	493'700	0.2%	0	0.0%					

Table 3: Shipments 2021 and installed capacities 2020 in selected countries (spindle equivalence)

Source: ITMF, International Textile Machinery Shipment Statistics (ITMSS-64-2021) and International Textile Industry Statistics (ITIS-63-2020)

Mills in Vietnam received 23,000 rotors and 150,000 spindles in 2021, representing about 2% of world shipments of short-staple spinning equipment. Installed capacity in Vietnam in 2020 was 4% of world installed capacity, so the 2021 machinery shipments indicate that cotton mill use in Vietnam is levelling off.

Likewise, Indonesia did not keep pace with other countries in 2021. Shipments of rotors to Indonesia totaled 6,000 and short-staple spindles totaled 46,000 in 2021, representing less than 1% of world spinning equipment shipments. Indonesia accounted for 4% of world spinning capacity in 2020.

With imports of 60,000 rotors and 450,000 spindles in 2021, Turkey accounted by far for the greater shipments of spinning equipment outside of Asia. Turkey's imports accounted for 7% of world rotor and spindle imports, while Turkey's spinning capacity in 2020 represented 5% of world spinning capacity. This suggests that Turkey's share of world short-staple spindle capacity is rising. With the

Turkish lira having dropped significantly against other currencies in recent years, exports of textiles and clothing from Turkey are apparently rising.

Portugal imported 26,000 spindles in 2021, the next highest in Europe after Turkey. It's notable that Greece imported spindles for the first time in a decade in 2021, with imports of 10,000 spindles. Spain imported 11,000 spindle equivalents in 2021, and Russia imported nearly 2,000 rotors, equivalent to nearly 9,000 spindles in 2021. Textile mills in Italy and Germany also added rotors and spindles in 2021.

Decline in Africa

Egypt and Kenya were the only countries in Africa to import any spinning equipment in 2021. Egypt imported 56,000 spindles, and Kenya imported nearly 300 rotors. Countries in North Africa, including Morocco, Algeria, and Tunisia imported no equipment in 2021. Likewise, Ethiopia, Lesotho, and Mauritius, each recipient of significant development aid to encourage value added exports, had zero machinery imports in 2021.

Country	Installed capacities 2020	% World	Shipments 2021	% World	Country	Installed capacities 2020	% World	Shipments 2021	% World
Egypt	1'170'000	0.4%	56'172	0.5%	Argentina	1'451'800	0.5%	72'536	0.0%
Ethiopia	459'750	0.2%	0	0.0%	Brazil	6'613'250	2.5%	147'186	0.0%
Malawi	65'000	0.0%	0	0.0%	Chile	170'500	0.1%	0	0.0%
Morocco	460'000	0.2%	0	0.0%	Colombia	308'750	0.1%	0	0.0%
Burkina Faso	16'450	0.0%	0	0.0%	Ecuador	213'000	0.1%	0	0.0%
Sudan	285'000	0.1%	0	0.0%	Peru	794'500	0.3%	5'040	0.0%
Algeria	325'500	0.1%	0	0.0%	Venezuela	511'250	0.2%	0	0.0%
Angola	112'100	0.0%	0	0.0%	Other S America	43'125	0.0%	0	0.0%
Kenya	61'075	0.0%	1'512	0.0%	Mexico	2'674'975	1.0%	87'755	0.8%
Lesotho	89'575	0.0%	0	0.0%	Nicaragua	47'200	0.0%	45'138	0.4%
Mauritius	97'600	0.0%	0	0.0%	Costa Rica	44'000	0.0%	35'904	0.3%
Nigeria	354'000	0.1%	0	0.0%	Honduras	207'205	0.1%	16'560	0.1%
South Africa	88'925	0.0%	0	0.0%	El Salvador	266'550	0.1%	14'625	0.1%
Tanzania	309'400	0.1%	0	0.0%	Guatemala	260'250	0.1%	8'868	0.1%
Tunisia	174'125	0.1%	0	0.0%	USA	2'782'750	1.0%	18'900	0.2%
Zimbabwe	88'850	0.0%	0	0.0%	Canada	196'000	0.1%	0	0.0%
Other Africa	285'975	0.1%	0	0.0%	Cuba	185'250	0.1%	0	0.0%
World	268'264'490	100%	11'261'340	100%	Other N America	185'250	0.1%	0	0.0%

Table 4: Shipments 2021 and ins	talled capacities 2020 in selected	l countries (spindle equivalence)
---------------------------------	------------------------------------	-----------------------------------

Source: ITMF, International Textile Machinery Shipment Statistics (ITMSS-64-2021) and International Textile Industry Statistics (ITIS-63-2020)

There have been dozens of studies, road maps, investment seminars, and conferences devoted to boosting mill use of cotton in Africa in order to create value added exports to encourage industrialization and to create manufacturing jobs. Yet, installed capacity in Africa has only increased by 400 thousand units in spindle equivalents since 2013.

Developments in Ethiopia are particularly disappointing. The international community is trying to boost the economy of Ethiopia to stabilise the region, and brands have been seeking an African production base to diversify their sourcing channels. Few things undermine foreign direct investment faster than a civil war.

Some Signs of Near-Shoring in the Western Hemisphere

Brazil is notable in the machinery shipments report because imports of 150,000 spindle equivalents in 2021 were easily the largest in the Western Hemisphere. Mexico accounted for 90,000 spindle equivalents and Argentina 70,000 spindle equivalents in 2021. Nicaragua, Costa Rica, Honduras, El Salvador and Guatemala also installed new capacity during 2021. There has been much talk in the past decade about a need to own-shore or re-shore or nearshore textile and apparel supply chains in the Western Hemisphere to protect against the impacts of diplomatic disputes with China and to insulate against supply chain disruptions. The machinery shipment statistics from recent years suggest that some of that may actually be happening.

Conclusions

Cotton mill use will be maintained and could perhaps expand further in China, Pakistan and Turkey. Mill use in India and Vietnam will not grow as fast as in the past, and cotton use in Indonesia, Japan, Korea, and Taiwan is likely to continue downward. There is some glimmer of hope that spinning in Greece, Spain, Italy, and Germany may be stabilising and might even grow, while textile activity in Russia might start to rise. Outside of Egypt, there are no indications of sustained growth in cotton use in the rest of Africa. In the Western Hemisphere, rising investment in Brazil and Central America may lead to increased mill use.

(This article updates an article published in July 2020.) (The views expressed in this column are of the authors and not that of Cotton Association of India)

Celebrating Nariyali Poornima

embers of the Cotton Association of India performed the annual ritual of Dariya Poojan at Girgaum Chowpatty on Thursday, 11th August 2022.

CAI Additional Vice-President Shri Vinay N. Kotak accompanied by Shri. Shyamsunder M. Makharia, Hon. Treasurer; Shri. Arun B. Sekhsaria, Director; Shri. Krishnaraj L. Negandhi; Shri. Jayesh Parmar; Shri. Ram Niranjan Verma; Shri. Janardhan Verma and Shri. Jitendra Sharma, performed the pooja and prayed for all-year-long prosperity of the cotton trade.







	UPCOUNTRY SPOT RATES (Rs./Qtl)												
Standard Descriptions with Basic Grade & Staple in Millimetres based on Upper Half Mean Length [By law 66 (A) (a) (4)]									ot Rate		ntry) 20 st 2022	21-22 C1	rop
Sr. No	. Growth	Grade Standard	Grade	Staple	Micronaire	Gravimetric Trash	Strength /GPT	8th	9th	10th	11th	12th	13th
1	P/H/R	ICS-101	Fine	Below 22mm	5.0 - 7.0	4%	15	17434 (62000)	17519 (62300)	17800 (63300)	18081 (64300)	18278 (65000)	18419 (65500)
2	P/H/R (SG)	ICS-201	Fine	Below 22mm	5.0 - 7.0	4.5%	15	17631 (62700)	17716 (63000)	17997 (64000)	18278 (65000)	18475 (65700)	18615 (66200)
3	GUJ	ICS-102	Fine	22mm	4.0 - 6.0	13%	20	16591 (59000)	16675 (59300)	16816 (59800)	16872 (60000)	17013 (60500)	17153 (61000)
4	KAR	ICS-103	Fine	23mm	4.0 - 5.5	4.5%	21	17659 (62800)	17744 (63100)	17856 (63500)	17997 (64000)	17997 (64000)	18137 (64500)
5	M/M (P)	ICS-104	Fine	23mm	4.5 - 7.0	4%	22	19346 (68800)	19431 (69100)	19543 (69500)	19684 (70000)	19825 (70500)	19965 (71000)
6	P/H/R (U) (SG)	ICS-202	Fine	27mm	3.5 - 4.9	4.5%	26	24661 (87700)	24802 (88200)	25083 (89200)	25364 (90200)	25561 (90900)	25702 (91400)
7	M/M(P)/ SA/TL	ICS-105	Fine		3.0 - 3.4	4%	25	20106 (71500)	20106 (71500)	20246 (72000)	20387 (72500)	20387 (72500)	20528 (73000)
8	P/H/R(U)	ICS-105	Fine	27mm	3.5 - 4.9	4%	26	24886 (88500)	25027 (89000)	25055 (89100)	25336 (90100)	25533 (90800)	25673 (91300)
9	M/M(P)/ SA/TL/G	ICS-105	Fine		3.0 - 3.4	4%	25	20387 (72500)	20387 (72500)	20528 (73000)	20668 (73500)	20668 (73500)	20809 (74000)
10	M/M(P)/ SA/TL	ICS-105	Fine		3.5 - 4.9	3.5%	26	22074 (78500)	22074 (78500)	22215 (79000)	22355 (79500)	22496 (80000)	22637 (80500)
11	P/H/R(U)	ICS-105	Fine		3.5 - 4.9	4%	27	25927 (92200)	26067 (92700)	26348 (93700)	26630 (94700)	26826 (95400)	26967 (95900)
12	M/M(P)	ICS-105	Fine		3.7 - 4.5	3.5%	27	25730 (91500)	25730 (91500)	25758 (91600)	26039 (92600)	26180 (93100)	26320 (93600)
13	SA/TL/K	ICS-105	Fine		3.7 - 4.5	3.5%	27	25786 (91700)	25786 (91700)	25814 (91800)	26095 (92800)	26236 (93300)	26376 (93800)
14	GUJ	ICS-105	Fine		3.7 - 4.5	3%	27	25449 (90500)	25449 (90500)	25477 (90600)	25758 (91600)	25898 (92100)	26039 (92600)
15	R(L)	ICS-105	Fine		3.7 - 4.5	3.5%	28	25027 (89000)	25167 (89500)	25449 (90500)	25730 (91500)	25870 (92000)	26011 (92500)
	M/M(P)	ICS-105	Fine		3.7 - 4.5	3.5%	28	26573 (94500)	26573 (94500)	26855 (95500)	27136 (96500)	27276 (97000)	27417 (97500)
	SA/TL/K	ICS-105				3%	28	26630 (94700)	26630 (94700)	26911 (95700)	27192 (96700)	27333 (97200)	27473 (97700)
	GUJ	ICS-105				3%	28	26292 (93500) 2712(26292 (93500)	26573 (94500)		26995 (96000)	27136 (96500) 27070
	M/M(P)	ICS-105			3.7 - 4.5	3.5%	29	27136 (96500) 27276	27136 (96500)	27417 (97500) 27558	27698 (98500) 27820	27839 (99000) 27070	27979 (99500) 28120
		ICS 105			3.7 - 4.5	3%	29	27276 (97000) 27698	27276 (97000) 27698	27558 (98000) 27979	27839 (99000) 28120		28120 (100000) 28401
	M/M(P) SA/TL/	ICS-105 ICS-105			3.7 - 4.5	3%	30	27698 (98500) 27839	(98500) 27839	27979 (99500) 28120		28261 (100500) 28401	28401 (101000) 28542
	K / TN/O SA/TL/K/	ICS-105				3%	31	(99000) N.A.				(101000) N.A.	
	TN/O M/M(P)	ICS-106	Fine		2.8 - 3.7	4%	33	(N.A.) 26292	(N.A.) 26292	(N.A.) 26152	(N.A.) 26152	(N.A.) 26152	(N.A.) 26292
	K/TN	ICS-107				3.5%	33	(93500) 26995	(93500) 26995	(93000) 26714	(93000) 26714	(93000) 26714	(93500) 26855
	M/M(P)	ICS-107				4%	34	(96000) 26995	(96000) 26995	(95000) 26855	(95000) 26855	(95000) 26855	(95500) 26995
	K/TN	ICS-107				3.5%	35	(96000) 27698	(96000) 27698	(95500) 27417		(95500) 27417	(96000) 27558
								(98500)	(98500)			(97500)	(98000)

(Note: Figures in bracket indicate prices in Rs./Candy)