

INDO-United States Collaboration May Help with Oil Spill Clean-up

By: Seshadri Ramkumar, Texas Tech University, USA

(Lubbock, USA, December 7, 2023)—Oil spill from a refinery in North Chennai, India has turned cyclonic floods into a toxic mixture.

Michaung tropical cyclone in Bay of Bengal has battered the northern coast of Tamil Nadu and southern Andhra Pradesh bringing life to standstill since the weekend. As Chennai, the capital city of Tamil Nadu is inundated with floods due to heavy downpour reaching 39-41 cm of rainfall in some areas, crude oil spill has been reported due to a leak in an oil refinery in North Chennai. Areas like Ennore are witnessing thick oil contaminated polluted waters creating panic and distress among the population who have been already suffering due to floods and lack of basic amenities.

Media reports and videos have surfaced today (December 7, 2023) showing hip deep water with oil in some densely populated North Chennai areas.

Crude oil spills are happening frequently around the world due to pipeline breaks, transportation accidents in pipelines through paddy fields and high seas. It will be beneficial to have strategic stockpiling of different oil absorbents and contaminant technologies. Long term planning by oil refineries, transportation groups, national and local governments should involve development of technologies and stockpiling of contaminant and absorbent products.

Environmentally friendly technology developed at the Nonwovens and Advanced Materials Laboratory, Texas Tech University has shown in laboratory studies that one gram of cotton-based absorbent can absorb 30 to 50 grams of oil. The results with crude oil were disclosed, which attracted global attention (<https://acrobat.adobe.com/link/track?uri=urn%3Aaaid%3Aascds%3AUS%3A3f992360-fa1e-40f7-8e44-f62c09ed0f17>).

A collaboration between Texas Tech University and Aruppukkottai, India-based Jayalakshmi Textiles (<https://today.ttu.edu/posts/2021/10/Stories/indo-us-collaborative-cotton-based-product-can-absorb-oil-spills-quickly-sustainably>) has resulted in the translation of the oil absorbent technology from laboratory to market space. The product has been successful in field trials in Oil and Natural Gas Corporation's sites in Godavari and Cauvery delta regions.

This collaboration fits with the mission of Government of India's "Make in India," initiatives. Texas Tech-Jayalakshmi Textiles collaborative technology aligns with Prime Minister Narendra Modi's emphasis on "Thinking Global and Making Local."

Given the recent oil spill in Chennai amidst heavy floods warrants public sector oil refineries to engage with industry and research laboratories to develop sustainable oil and toxic chemical sorbents.

The technology developed at Texas Tech University is field ready and support for scaling up by Jayalakshmi Textiles will result in the mass availability of a proven oil absorbent product.

Cotton-based oil absorbent technology when scaled up will be cost effective. Such products have long shelf life and can serve as a countermeasure to oil pollution.

Chennai spill is a wake up call for those involved in crude oil and disaster preparedness sectors.

Ramkumar, S

Subject: FW: from Manohar Kodela

Very nice to see TexSnips : **INDO- United States Collaboration may help with Oil Spill Clean-Up**. It is very nice to know that M/s Jayajyothi is collaborating with TTU. I appreciate your initiation.

Recently, I had also gone through your article, regarding US Defence having accepted your product. I congratulate you for your Hard work and research.

I wish to know more about Technical Textiles, which we can cater to Indian defence as well as the medical Industry.

I wish to introduce myself to you. I am Manohar Kodela and I have worked in the Spinning Industry for more than 38+ years in India as well as in West Africa and now working as a Freelancer.

My son started a startup named M/s Dreamzeal Technologies P Ltd and is working for defence related projects in R&D, mainly in Mechanical, Electronics, Optics. As I am in the Textile field, I want to add related Textiles also for him. Please give me some advice.

Actually I tried to meet you when I was in the US 3 months back, but unfortunately I could not make it. Hopefully, I will meet you in person next time.

Thanks and regards,

--

Manohar Kodela

Home: +91 94944---.

" You have to grow from the inside out. None can teach you, none can make you spiritual. There is no other teacher but your own soul. " - Swami Vivekananda

Bed Bugs and Textiles

By: Seshadri Ramkumar, Professor, Texas Tech University

(Lubbock, USA, November 13, 2023)—Recently, bed bugs made sensational news in France.

Textiles are not the reasons for the resurgence of bed bugs.

Although bed bugs are prevalent all over the world and do not cause any serious medical harm, the issue got hyped up to an extent that it became a topic of discussion in the French parliament. The news became sensational because of the 2024 Summer Olympics in Paris, which will attract about 15 million visitors bringing over US\$ 270 billion in revenue due to travelers providing enormous business opportunity for travel, hospitality, and hotel sectors.

The textiles industry that manufactures and exports home textiles may benefit from the Olympic games. Normally fine count cotton yarns are woven into tight weave structures to make bedspreads and other textiles that are consumed by hotel industry, stated Velmurugan Shanmugam, General Manager of Aruppukkottai, India based Jayalakshmi Textiles, which manufactures a variety of cotton yarns that go into home textiles.

Home textiles sector will get a boost as France will have to import these textiles that find applications such as bedspreads, bath towels and tabletops, to name a few. Given the name “bed bugs,” it may send misleading information that beds and accessories like bed sheets are the reasons for the resurgence and the sudden growth of these pests, in France.

Globalization and more travel by humans, particularly after the COVID-19 lockdowns are some reasons for increased bed bug infestations. “There has been global resurgence of bed bug population in the past 30 years,” stated Dr. Robert Puckett, Extension Entomologist at Texas A&M University.

“Bed bugs are world class hitchhikers and are found in places where human rests such as beds, recliners, etc.,” stated Anthony Mobley, Regional Manager at Fox Pest Control. According to experts, these pests can sense carbon dioxide which humans exhale and get attracted to them when they offer less resistance. “Bed bugs can detect carbon dioxide away from 20-feet when humans exhale,” stated Robert Puckett.

Cimex lectularius is a major species of bed bug and is found globally. These pests feed on human blood and hence approach humans when they get the least resistance, i.e., while sleeping. As this is the case, these bugs appear at night in mattresses and bedspreads, however, these bugs rest in crevices and spaces such as electric socket holes. Therefore, textiles are not the reasons for growth in bed bug infestations, although these bugs can be transported by baggage, clothing items, etc.

“Bed bugs are found in all 50 states in the United States and no city is immune from these bugs,” stated Anthony Mobley.

Although there are no serious medical concerns, people are uncomfortable and lead to psychological discomfort. As these bugs suck human blood, they lead to irritations and itching on the skin.

Neonicotinoids and pyrethroids are common classes of insecticides that can be used. Over application of single class of insecticides lead to resistance,” stated Robert Puckett.

In the case of bed bug infestations, it is important to approach pest control specialists. “Bed sheets and curtains need to be removed, washed, and dried. Clothes in chest of drawers must be washed and dried,” advised Anthony Mobley.

To my query on how to protect textiles and bedspreads, Anthony Mobily advised that clothes need to be dried for at least 30 minutes at a consistent temperature of 120o F or higher. High heat in dryer will kill eggs and adults agreed Robert Puckett.

Ramkumar, S

Subject: FW: TexSnips: Bed Bugs and Textiles

From: GM Tech Jayalakshmi Textiles <gmtech@ >

Sent: Tuesday, November 14, 2023 2:01 AM

To: Ramkumar, S <S.Ramkumar@ttu.edu>

Subject: Re: TexSnips: Bed Bugs and Textiles

This email originated outside TTU. Please exercise caution!

Dear sir

The timely write up for the hospitality sector and the manufacturing sector,. to avoid unnecessary negative sentiments during the Olympics in France.

Thank you

velmurugan.s
General Manager

DIVYALAKSHMI TEXTILES PVT LTD.,
KULASEKARANALLUR VILLAGE,
RAMASAMY NAGAR POST,
ARUPPUKOTTAI - 626 105.
CELL NO: 97903 97361.

Cotton Demand Issue Dominates the Textile Ecosystem

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, November 7, 2023)—Demand for textiles is weak which dominates the cotton ecosystem.

“Global demand for textiles has come down leading to cascading effects such as unit closures in South India,” stated Gandhiraj Krishnasamy, General Manager-Sales at Coimbatore-based Lakshmi Card Clothing.

India being the second largest producer of cotton is expected to produce 20 lakhs (2 million) bales (170 Kgs each) less in the 2023-24 season beginning this October as against last season.

On November 6, India’s Committee on Cotton Production and Consumption (COCPC), under the Ministry of Textiles held its meeting in Mumbai. Based on the official data released after the meeting, the crop estimates for the new season beginning on October 1 will be lower than the 2022-23 season.

While production is projected to be less, due to higher opening stock of 64.08 lakh bales (6.4 million), supply will be marginally higher than last year. Total demand will be slightly higher for 2023-24 at 33.5 million bales (170 Kgs each).

Above projections show that the cotton situation in India is as the last season with a tight supply and not a sufficient increase in demand.

Demand enhancement is needed is the general sentiment I got by discussing with cotton and textile mills executives. Agreeing that the demand is the issue, “spinners are not building inventory,” opined Gnanasekar Thiagarajan, Director of Mumbai-based Commtrendz Research.

“Being the Diwali festive season, we hoped that the demand for domestic textile goods will pick up, but that is not the case,” stated Velmurugan Shanmugam, General manager of Aruppukkottai-based cotton spinning mill, which has 72,000 spindles. “Normally at peak season, we process 3,500 bales/month but our consumption has been reduced to 2,800 bales/month,” added Velmurugan Shanmugam.

“Given the expected reduced cotton production in states like Telangana, prices should have climbed up, but that is not the situation,” stated Gnanasekar Thiagarajan.

Trade imbalances, power cost in India, reduced global demand are affecting the textile situation in India, which is having a global effect.

Interestingly with the lowering of cotton prices, spinning margins have also come down. It should be the other way, provided there was demand for textiles, observed Gandhiraj Krishnasamy.

Interactions with spinning mill executives reveal that mills are selling yarns at a loss of about Rupees five per Kg.

Trade imbalances such as the availability of imported fabrics from China and garments from low-wage countries have made Indian products uncompetitive leading to demand slump.

“There is no uptake of garments from Tiruppur region, which is a knitted garment hub,” stated Gandhiraj Krishnasamy. Many garment units and open-end spinning units have announced closures from today till November 25th, added Gandhiraj Krishnasamy.

I have been insisting that textile mills pay close attention to geo-political situation, global economy, demand, and supply situation before making any decision with expansion and inventory buildup. In a major event hosted by the Textile Association (India)-South India Unit, in Coimbatore during the summer of 2022, when the price of cotton in India was in the upwards of Rs. 80,000 per candy (356 Kgs), my opinion was that such a high price will not help with the demand, and the market must cool down. Today, when Sankar-6 variety is at Rs. 57,000 per candy, demand is weak

Research Investment & Economic Growth

By: Seshadri Ramkumar, Texas Tech University

These days a nation's strengths are measured by many factors, which include its technological advancements. Technological advancements happen with investments in education, development of technically skilled workforce, and substantial investments in research without excluding support for creative efforts.

While it is essential for the federal government to have major agencies such as National Science Foundation, National Institutes of Health, and Defense Advanced Research Projects Agency, it is laudable that Texas has set the proper priority by having initiatives to support discoveries and translation of ideas to the marketplace. We are at an important place in the science and technology landscape with Proposition 5 on the ballot in this election, which will establish the Texas University Fund. It is important for the citizens in West Texas to support this proposition, which will boost research and economic growth in our region.

There is correlation between investments in research and GDP of nations. Although the effect may not be immediate, research ecosystem builds wealth of nations along with high paying jobs. Smaller countries like Singapore, South Korea, Taiwan, and Israel are good examples to highlight this relationship. Of course, strategic investments are needed depending on the global and national needs. Taiwan has focused heavily on semiconductors, while Israel has focused on defense and water desalination. United States being a large country can do improvements in R&D investments as a ratio of its GDP. Opportunities for higher studies, research in STEM disciplines, career growth, etc., attract talents from across the globe to the United States.

Texas has a history of R&D investments with its earlier Advance Research and Advanced Technology programs. These investments have resulted in translational research creating entrepreneurs and growth of cities. Currently, a major opportunity lies with the approval of the Texas University Fund that will support the growth of four public universities in Texas. Texas Tech, being a research and employment powerhouse, will benefit from the TUF creating more high paying jobs, which will pay rich dividends in terms of economic boost in the region.

"TTU's research has an economic benefit to the region in the state through the creation of technologies, intellectual capital that stimulates technology and economic development and the investment of research dollars that are reflected in economic impact," stated TTU President Lawrence Schovanec.

TTU, being a Tier 1 research intensive institution, is already attracting high level scholars and graduate students from Texas and different parts of the world. As stated above, with the increase in research, student, staff, and faculty population will increase, which will translate into increased economic activity in the city and surrounding region. In the past decade, data shows that the total research expenditure has grown from 137 million dollars in FY13 to 230 million dollars in FY23. Increased research activity needs modern infrastructure which translates into more building projects within the campus and in the region.

Texas Tech has its priorities set in the right direction to develop a vibrant research ecosystem with initiatives such as Innovation Hub and Tech Park.

Over two decades ago, Tech realized the impact of research commercialization and took early steps to grow the research enterprise. Patents were formally recognized in the tenure and promotion process encouraging the creation of ideas that can be taken to the marketplace. "Translating research to the marketplace is of paramount importance as it serves as a bridge between innovation and practical applications, benefiting both academia and industry. Our experience with Texas Tech University in the translation of research to the marketplace has been instrumental in developing FiberTect for dry decontamination," stated Amit Kapoor, President of First Line Technology. Commercialization of research has grown tremendously, attracting licensing agreements with multinational companies. Licensing revenues to the TTU System has reached one million dollars annually for two years in a row, indicating increased commercialization of research from TTU System laboratories.

Texas Tech has strategic research strengths in areas such as cotton, alternative energy from wind, sustainable fertilizer production, chemical and biological defense, and forensic science. The TUF will support research across disciplines strengthening its prominence in important areas. “Cotton producers greatly support research and innovation in both the private and public sector. Texas High Plains producers value academic research so much that they’ve created their own funding coalition,” stated Kody Bessent, CEO of Plains Cotton Growers, Inc.

Agreeing with the strategic strengths of TTU, which has direct impact in the region, Dr. Schovanec stated, “Increasing investments in research and talent retention is key to attracting more venture capital, bolstering innovation, and becoming the world leader in trending areas such as energy, agriculture, national security, and climate.”

TUF will support the mission of TTU by educating students by world-class researchers as the money will be used to support undergraduate research, which is an important aspect of 21st century research universities. TTU will be able to acquire state-of-the-art research equipment and enhance the library capacity, which is important for acquiring new knowledge.

Rewarding success is part of American culture and Tech has been progressing well in its mission of teaching next-generation workforce, generating ideas, and translating them to marketplaces, wherever applicable.

Citizens in our region are witnessing growth in construction, booming economic activities in shops near campus and around the city. These are signs of vibrant economic growth, which needs encouragement and support. It is in the best interest for our region to have Proposition 5 voted favorably in the November election.

Note: This article appeared as an Opinion piece in Lubbock Avalanche Journal on October 29, 2023.

Comment by Dr. Tosha Dupras, dean, College of Arts and Sciences, TTU on my Opinion column, Research Investment and Economic Growth through Proposition 5 that appeared in Sunday paper, October 29, 2023

Tosha Dupras, Dean, College of Arts & Sciences at Texas Tech University

Great article, Ram! Thanks for writing it at such a crucial time in our history at TTU.

(This comment was filed in LinkedIn on October 29, 2023)

Cotton Oil Absorbent Technology Shines in the International Stage

By: Seshadri Ramkumar, Texas Tech University, USA

(Lubbock, USA, October 23, 2023)- Cotton oil absorbent technology developed at Texas Tech University's (TTU) Nonwovens & Advanced Materials Laboratory was exhibited and demonstrated at the recent international conference organized by ICAC, held in association with Taipei Innovation Textiles Apparel Show during October 18-19, 2023.



(Photo Courtesy: Mike McCue, ICAC)

To be invited by the global body, International Cotton Advisory Committee (ICAC) showcases the usefulness of the technology developed at TTU.

Mike McCue of ICAC has been gracious enough to showcase the technology on behalf of TTU.

Nonwoven Wipe Technology in the Arctic

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, October 19, 2023)—FiberTect decontamination wipe has gone to the Arctic Circle.

Recently, Fredericksburg, VA-based First Line Technology has successfully demonstrated the efficiency of cold weather decontamination during a training event at Samuel Simmonds Memorial Hospital in Utqiagvik, Alaska, using nonwoven dry decontamination wipe, FiberTect as a patient and responder decontamination wipe technology.

The hospital is in the northernmost part of the United States, 350 miles above the Arctic Circle—bordering the Arctic Ocean. The average temperature in this region is 17°F.

Samuel Simmonds Memorial Hospital is the only hospital which provides healthcare services in the North Slope Borough of Alaska. This area is prone to fentanyl and other opioid addiction issues, as well as being in the oil drilling region, there is a necessity that the first receiver teams are adequately equipped with decontamination technology that works in severe cold weather conditions.

FiberTect, dry decontamination wipe was invented in the Nonwovens & Advanced Materials Laboratory at Texas Tech University and is a model for lab to reality translational research. This technology is part of “Hybrid Decontamination,” approach commercialized by Fredericksburg-based First Line Technology.



Demonstration of FiberTect Decontamination at Anchorage Fire Training Center (Source: CRREL, U.S. Army)

Normal liquid-based decontamination technologies are not efficient in extreme cold weather environment, which is 35°F and below. Therefore, in regions in the Arctic Circle such as the North Slope Borough in Alaska, patient decontamination and surface decontamination with soap and water is not feasible. During the training exercise the maximum temperature with high winds was only 14°F.

“FiberTect is allowing first receivers and first responders to perform effective decontamination in austere temperatures where other decontamination approaches may not be viable,” stated Corey Collings, Director at First Line Technology. The FiberTect nonwoven wipe due to its patented structure can effectively remove fentanyl and radiological particles, as well as added Collings.

In the case of many toxic chemicals that have high vapor pressure, dry decontamination using FiberTect technology works. First Line Technology has perfected the protocol where contaminants like fentanyl are removed from the skin and other surfaces. These toxic substances can further be degraded using Dahlgren Decon.

Continued...

The hybrid decontamination technology involves dry FiberTect with Dahlgren Decon or Dahlgren Part A soap depending on the nature of the contamination stated Collings.

FiberTect nonwoven technology is finding broader applications on its own and with decontamination solutions.

FiberTect wipe is attracting customers in the northernmost town in the United States in the Arctic region and overseas as well, informed Corey Collings. Government clients like U.S. Army have examined the performance of FiberTect as recently as 2022 in the Arctic Eagle exercise in Alaska.

Global Cotton & Textiles Scenario

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, October 4, 2023)--Where are the cotton and textiles markets heading? At the behest of Ahmedabad-based Diagonal Consulting, Professor Seshadri Ramkumar of Texas Tech University delivered an invited presentation on “Sustainability, Cotton and Global Textiles.”

The lecture was delivered at 2.30AM CST-USA, October 4, 2023 virtually to an audience of about 150 attending in person in ATIRA Campus, Ahmedabad. The conference was chaired by Dr. P. R. Roy, former Group CEO, Arvind Group, and a revered textile industry veteran in India.

Dr. Ramkumar articulated that the industry should focus on 1) Economic sustainability; 2) Environmental sustainability and 3) Employee sustainability.

Demand will be the key driver for the industry, which needs an uptick now. Dr. Ramkumar emphasized the importance of two regions for the global cotton sector: 1) High Plains of Texas and 2) Saurashtra, Gujarat, India.

Firsthand information on High Plains cotton production was possible due to the support of Ms. Kara Bishop of Plains Cotton Growers, Inc., Lubbock.

Going forward, textile industry and/or global sector should focus on modernization, value-addition, increasing the productivity. About Indian cotton sector, yield and quality improvements are needed.

The talk of 37 minutes presents an overall scenario and a few thoughts for improvement.

<https://www.youtube.com/watch?v=6xZwZUVvV68>

Textiles Need Demand Uptick

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, September 20, 2023)---Textiles sector needs demand uptick and more cargo traffic.

A record attendance of 255 people representing all segments of cotton flow met today (September 20) at the West Texas Flow Marketing Meeting in Lubbock to discuss the state of the industry, issues at hand such as supply chain, transportation, and warehousing.

It is clear that the U. S. crop this year will be less--thanks to dry and prolonged hot summer in the High Plains of Texas. Crop situation and China occupied the center stage of discussions in Lubbock.

China's economic situation is a problem, with growth rate less than 5 percent. The economic situation is not being helped by the housing crisis and high unemployment rate in China. We are used to witnessing double digit growth in China during pre-pandemic era predominantly due to its manufacturing capacity, which is not the scenario now. "As China's economy suffers, it affects the regional economy as well," stated Daniel Lee, Export Sales Manager at HMM American Shipping Agency, Inc. Foreign investors are not investing in China resulting in job losses and hence affecting middle class population, added Daniel Lee.

Increase in labor costs, forced labor issues and geopolitical tensions between China and some nations are forcing foreign investments to other countries such as Indonesia, Vietnam, Cambodia, in Southeast Asia. China is looking for domestic investments and domestic market growth to grow its economy opined Daniel Lee.

There are opportunities for India to boost its manufacturing sector. India should focus on value-added products and enhance its product basket to be a viable alternative to China. Government of India and the Indian textile industry are aware of this necessity and efforts are underway to enhance its textile sector by focusing on post spinning sector.

Increase in imports of textile goods into developed economies such as United States, United Kingdom and Canada is an indicator of demand boost in cotton. A quick survey of the attendees at today's meeting today indicated that imports into the U.S. will pick up during the Q2 of 2024 indicating a slow demand for textiles in the next few months. "United States' cotton industry is competing against countries like Brazil, which sells cotton at 3-4 cents less and we have to be competitive," stated Beau Stephenson, President of Texas Cotton Association. There was sentiment among the participants in today's meeting that for the 2023-24 cotton marketing season, United States will export less than 11 million bales (480 lbs. each) of cotton.

"In this current situation effective communication with our partners is needed to plan for the season ahead," stated Kandice Poteet, Executive Vice President of Texas Cotton Association. A representative of cotton truckers attending the meeting agreed that partnerships and constant communication with stakeholders are important to move cotton forward.

Given the lack of robust demand for textiles due to inflation in the cost of daily essential groceries, higher fuel prices and mortgage rates, effective engagement among different segments in cotton flow, brands and retailers will be critical.

Textile Industry Needs Demand Revival

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Toronto, Canada, July 24, 2023)—As the economy expected to rebound in the United States followed by Europe, global textiles industry is in the need of demand revival.

Past 18 months has seen rocky economic climate showing anomalies such as high inflation, strong labor market and weak consumer demand. Majority of citizens in developed economies such as Canada feel pessimistic about their future. Just this week, Canadian Prime Minister Justin Trudeau is expected to make a major cabinet shuffle to put new ministers in key positions to boost job growth and revitalize the economy.

Export oriented textiles sector in countries like India have been hit hard by weak export demand, which in turn impacted the domestic market as export-oriented companies have been forced to dump their products in domestic market. In India normally, spinning mills maintain stock of 1-2 weeks of production, but due to low demand, stocks worth one month or more of production is held by many companies leading to crisis.

Indian textile industry has been demanding the waiver of 11% custom duty on cotton imports to reduce the cost of raw material, stated Velmurugan Shanmugam, General Manager of Aruppukkottai, India-based Jayalakshmi Textiles.

Given the sensitivity with regard to farmer's livelihood in India and the ensuing parliamentary elections next year, in my opinion, it is highly unlikely that the Government would do anything with waiving tariffs on cotton imports. Gnanasekar Thiagarajan, Mumbai-based Cotton Analyst agrees with my view and opines that with inflation expected to have a soft landing in the United States, demand may pick up in the next quarter.

Overcapacity in certain segments of the textile sector, excessive stocks of yarns and weak global demand are all contributing to the current crisis in the textile sector in India.

Product diversification, strategic stocking of raw materials, automation, better labor retention policies are all some strategies the industry can adopt. Jayalakshmi Textiles has been manufacturing varied products and utilizes solar and wind power to have a better handle on the cost.

“It is important to modernize and not go on expansion in the current times,” stated Velmurugan Shanmugam.

With economic revival expected and no recession on the horizon, demand may pick up. “Downside will be limited from now,” opined Gnanasekar Thiagarajan.

Textile industry has to revitalize depending upon regional needs and strategic strengths such as enhancement of crop yields in India, manufacture of sustainable textiles at affordable prices in developed economies, etc.

Importantly, there needs to be better communication across the supply chain, and better engagement with policy makers and consumers.

Stressors for the Global Textile Industry

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Atlanta, USA, July 20, 2023)—Low demand and over capacity are putting stress on the global textile sector.

Rebalancing the supply and demand situation, moving towards sustainability and handling regulations are some of the key themes that were discussed recently in the 3-day World of Wipes conference in Atlanta, USA.

COVID-19 forced spunmelt nonwovens and medical textiles industry to increase their capacity and build up production. In the two-year period during COVID-19 meltblown production doubled as well as spunlace products. Demand for single use medical textiles dwindled resulting in over stock situation.

While inflation is expected to have soft landing, global demand of textiles is moderate to low. In India, textile industry is forced to reduce its production. About 20% of knitted and garment sectors in Tiruppur and Noida have stopped production. In the State of Tamilnadu which is the number one state in producing cotton yarns, spinning mills are facing dire situation and are pleading the Central and State governments for temporary relief.

“There will be overcapacity of wipes for next three years,” stated Rahul Bansal, Global Head-Nonwovens, Mumbai-based Birla Cellulose.

Inventory has to be repurposed and new markets have to be explored. Citing Birla Cellulose’s efforts in creating new partnerships across the supply chain, Bansal emphasized the importance of collaboration. In April 2023, Birla Cellulose and Sparkle have announced partnership to develop viscose based diaper products. “Co-creation is the way forward,” stated Rahul Bansal.

While collective representation to governments as undertaken by Coimbatore-based The Southern India Mills’ Association is the need of the hour, industry has to strategize in terms of sustainable products, future market prospects and competitive advantage opportunities. Trade associations in developed nations such as the Association of the Nonwoven Fabrics Industry-INDA and Brussels-based EDANA have work cut out to work with the governments on behalf of the industry with regard to Single Use Plastic Directive, flushability issues, and other chemical regulations.

Productivity enhancement at the farm level in terms of cotton production in India, exploring new products which are sustainable and delivering products to consumers at affordable prices are important areas that need attention.

Collaboration with all segments of the industry and effective communication with consumers are the need of the hour.

Non-Plastic Advanced Textiles Sector

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Atlanta, USA, July 19, 2023)—There is growing need and interest for plastic free nonwovens and advanced textiles.

On July 18, 2023, World of Wipes international conference organized by Cary-based Association of the Nonwoven Fabrics Industry-INDA began with its largest gathering ever, which is in its 17th edition. About 500 people are attending the three-day event in Atlanta.

Growing regulations on the use of plastic-based products in the EU and in the United States have heightened the need for the nonwovens and advanced textiles sector to look for alternatives to synthetic materials. The first day talks focused heavily on sustainability and the efforts by the global nonwovens sector to become carbon neutral.

There are enormous opportunities for cellulose such as pulp and cotton and other natural fibers such as flax and hemp in developing single use and durable nonwovens.

Given the quantity of nonwovens that come out of high-speed machines that can operate at 1200 m/min, there may not be enough non-plastic materials to meet the need in the immediate future, stated, octogenarian Mr. C. K. Wong, Chairman and CEO of Hong Kong-based U.S. Pacific Nonwovens, who has been in the industry for over 53 years.

Cotton can find new opportunities in the nonwovens sector as the cost will be competitive with bioplastics, added C. K. Wong. The industry has been successful in developing food packaging and medical products using bio-based materials such as PLA. Japan's AsahiKASEI has been leading in the development of spunbond nonwovens using cotton linters, to develop products for wipes and cosmetics industry.

Consumers like green products but expect products with good functionality at similar cost levels as synthetic-based nonwovens, which is a challenge for the industry. "The nonwoven industry is transitioning to less plastic-based raw materials. Consumers are becoming curious about resources, which will drive innovation. Furthermore, growing regulations such as EU Single-Use Plastic Directive will necessitate the immediate need," stated Tom Carlyle, Nonwovens Commercial Manager-Americas at Lenzing Fibers.



Seshadri Ramkumar (Left) and C. K. Wong (Right)

"Spunlace (hydro entangling) technology is employed in China to develop virgin cotton-based nonwovens with 6 or more lines running," stated Oliver Doring, Director of Sales & Marketing at Trutzschler Nonwovens. Two spunlace lines are developing cotton-based spunlace nonwovens in India and an additional line will be online in 6-weeks which can develop cotton-based wipes.

The nonwovens and advanced textiles industry is moving towards an interesting spot to develop sustainable materials at competitive price levels.

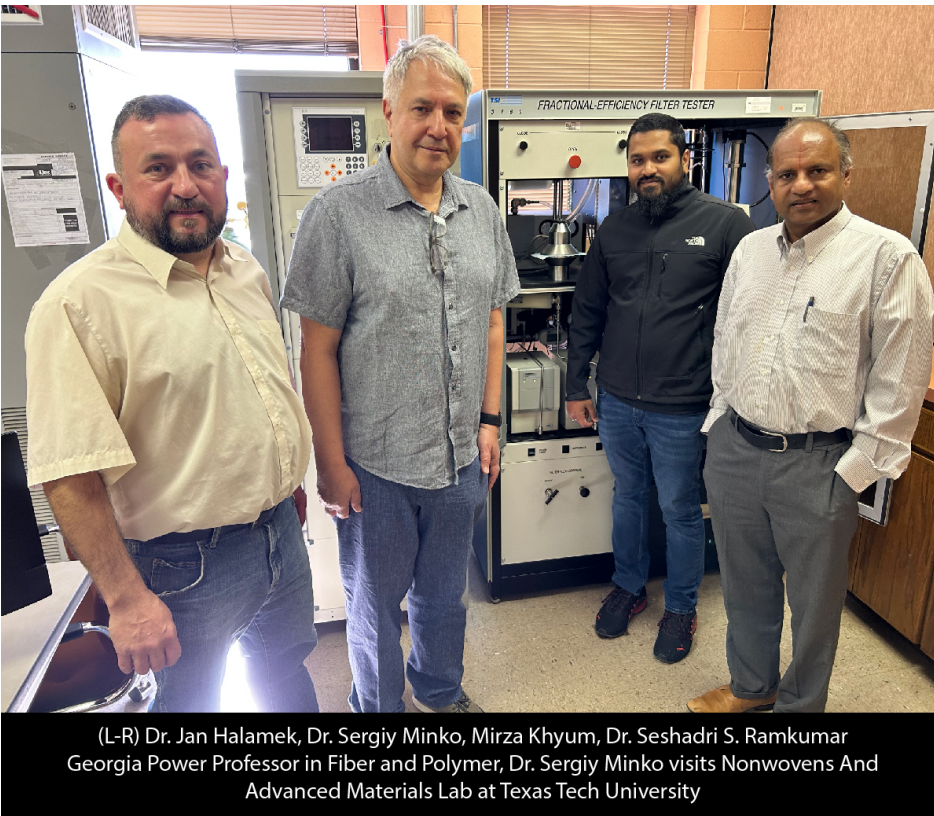
What's Next for the Textiles Sector?

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, April 19, 2023)—Textile sector is not immune to the global uncertainties and the predicted slow global economic growth.

The recent report by IMF titles the economy to have a “Rocky Recovery,” with the global growth pegged at 2.8% this year and expected to grow at 3% in 2024. Textile products are dependent on consumer buying power and their interest and hence the industry must watch the economy while working on fashion products for the next year. As EU zone is an important importer of commodity and fashion products from India, Bangladesh, and Vietnam, the forecast that this year, the economies of EU and the United Kingdom will slow down before rebounding to about 2% in 2024 is not a positive news for the textile sector.

The current tight economic and political situation is providing an opportunity for the textile sector to assess its landscape and strategize plans for its future. The industry needs to work on applicable aspects of sustainability and look for opportunities beyond its comfort zone. These aspects were clear in my discussion with Professor Sergiy Minko, Georgia Power Professor in Fiber and Polymer Science at University of Georgia, USA.



Professor Minko, who originally hails from Lviv in Ukraine, visited Texas Tech University recently to deliver a seminar and initiate collaborations is well suited to analyze the global situation and its impact on the textiles sector. He insisted that the industry should investigate sustainability with a 360-degree approach. “Not only sustainable materials are needed, but the sector also needs to look into sustainable dyeing and finishing,” stated Professor Minko. As nations are investing in funding for economic revival, where R & D investments play their role, the textile industry should seize this opportunity. Professor Minko agrees that investments in research by governments are needed to boost the textiles and soft materials industry.

Textiles have a vital role to play in health care and environment segments, and the industry should focus on these areas, added Professor Minko. It is timely that the industry pushes more into risk taking approach and build the “Start-up Ecosystem.” “Research in companies is expensive, and so start-ups, can serve as a bridge between academic laboratories and the industry,” stated Minko. When proof of concept is established by start-ups, major companies will be willing to buy the start-ups creating opportunities for high paying jobs and liquidity for SMEs to invest in research and new products, added Sergiy Minko.

Agreeing that society must initially pay more for sustainable products, eventually it is worth as we will leave a sustainable world for our future, opined Professor Minko.

The textiles sector should focus on cost-effective sustainable approaches, better outreach and engagement with the consumers and focus on products that save lives and protect the environment.

Combating Opioid Crisis with Nonwoven Wipes

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, April 16, 2023)—FedEx recognizes Synthetic Opioid Safety (SOS) kit, which has nonwoven wipe as its component.

In the past decade, synthetic opioid usage and illicit drug trafficking have become national crisis in the United States. According to United States' CDC, synthetic opioid related deaths have increased by over 50% from 2019 to 2020. Such drug usage and over dosage affect even high school children, causing a national crisis.

Fredericksburg, USA-based First Line Technology (FLT) has been at the forefront of developing products for combating opioid crisis such as Synthetic Opioid Safety kits and countermeasures systems to protect warfighters and first responders.

Recently, FedEx has selected FLT has one of its Top 100 Small Business entries in the Small Business Grant Competition for the development of Synthetic Opioid Safety (SOS) kit. The kit consists of Dahlgren decon formulation and FiberTect decontamination nonwoven wipe. FLT is the only small business entity from the State of Virginia in the United States to receive this recognition.

According to FedEx, the Top 100 companies were chosen from thousands of businesses. SOS kit entry brief is available at:

<https://smallbusinessgrant.fedex.com/entry/bngqz7uP?from=top100>

“Being on FedEx’s Small Business Grant Contest’s Top 100 finalists is an honor. The path to commercialize products like FiberTect and Dahlgren Decon are not always easy as a small business, but with the help and recognition by organizations like FedEx it makes it worth it,” stated Amit Kapoor, President and Founder of First Line Technology.

FiberTect wipe is a patented technology based on research at Texas Tech University and lends itself to use different fibers such as cotton, synthetics and blends. The type of fiber helps with multiple functionalities such as water repellency, toxic chemical absorption, etc.

The nonwoven wipe is part of hybrid decontamination procedure, which is gaining acceptance.

“When we developed our hybrid decon solutions for first responders to combat the opioid epidemic our vision was to ensure that they had the best tools and training to keep themselves and the public safe,” added Amit Kapoor.

“We don’t solve any problem these days by working in silos. Products like SOS kit is a good example of technology commercialization involving multidisciplinary fields such as textile science and chemistry. Such efforts will lead to positive contribution to our society by providing solutions to major problems affecting our society such as opioid crisis and pandemic scenarios,” opined Professor Brendan Kelly at Texas Tech University.

Nonwoven and different textile materials have been at the forefront of fighting global pandemic and public health crisis scenarios with the help of products such as PPEs and SOS kits.

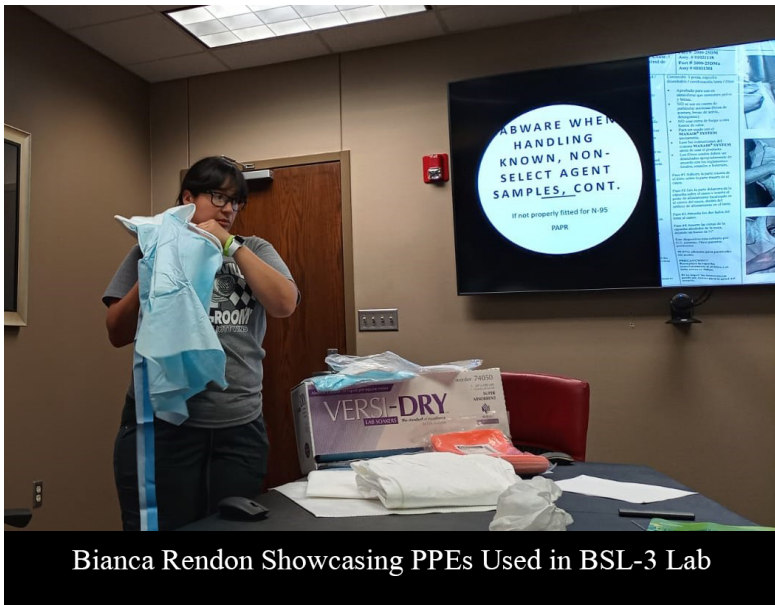
Advanced Textiles Sector Needs to Engage with the End-User Community

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, April 12, 2023)—Advanced textiles sector such as hygiene and medical nonwovens needs to effectively outreach and engage with the end-user community.

Technical textiles use different fibers such as those that have functionality and those that are sustainable such as cellulose based. This technical information needs to be provided to practitioners like doctors, nurses, and laboratory personnel. In addition, disposal aspects, safe practices and sustainability efforts by the PPE industry must be relayed to those who use them daily. The end-user community is broad and hence the industrial and trade associations in the field can help the sector with engagement and outreach. The outreach efforts will help with greater buy-ins for the nonwovens and advanced textile products.

Nonwovens and industrial textiles industry develops many products which are life savers, contribute to environmental protection and provide jobs. The usefulness and details of the products need to be shared with the end-user community such as medical practitioners, nurses, hospital staff, emergency personnel, to name a few.



The outreach efforts will help with greater understanding on the characteristics and functionalities of these value-added products and will result in greater acceptance and buy-ins by the users. This aspect was evident in a presentation done in my graduate class on Fiber Forensics on April 11 by Bianca Rendon, researcher with the Biosafety Response Laboratory at Texas Tech University. This laboratory is a BSL-3 laboratory headed by Professor Steven Presley and was the first laboratory in the State of Texas to undertake the COVID-19 testing, when the pandemic broke out in early 2020 in the United States. The presentation highlighted different nonwoven and cotton-based textiles that are used daily by the personnel in biosafety laboratories.

“PPEs are life savers,” stated Bianca Rendon who uses different types of nonwoven-based PPEs daily when testing select and non-select biological agents.

Products such as PPEs with cotton cuffs, laminated and absorbent wipes, protective shrouds and helmets are a myriad of advanced textile products that are needed in medical and biological safety laboratories. “Practitioners like me will benefit if the industry provides us with information on the structure, finish applied on the products we touch and use on a daily basis,” added Bianca Rendon.

Technical textiles that are used in PPEs use different structures such as woven, nonwovens and laminates. Common fibers used are polypropylene in the case of nonwovens, medical drapes and coats use blends such as cotton, polyester, rayon, etc.

“I understood the different structures and functionalities of fibers after attending the Fiber Forensics class, and hence it will be useful if the industry reaches out to actual users of the products,” emphasized Bianca Rendon.

It was evident from the discussion that the user-community is interested in using safe methods, cost effective single use products and explore sustainable ways and products towards use and disposal.

The technical textiles sector has a lot of opportunities to penetrate different market segments by effective outreach and engagement with the daily user-community.

Is Cotton in Troubled Waters?

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, March 31, 2023)—Cotton sector will be witnessing testing times.

Over 1500 participants are gathering during March 30-31, as part of Texas Cotton Gin show in Lubbock before the beginning of the planting season in May in High Plains of Texas.

While there were mixed opinions due to many uncertainties in the industry, stakeholders are hoping for a better weather to move the cotton industry forward. Economy is playing a significant role resulting in low demand for textile items. Inflation has resulted in rise in input costs slowing down consumption of textiles and other commodity items.

“Cotton sector will have 1-2 years of tough times,” stated Shankar Venkatachalam, President of Bajaj ConeEagle LLC, which has its ginning machinery running in over 20 countries.

Cotton producers, bankers, insurers, and other stakeholders are hoping that there will be timely rains in the High Plains for having a better season this year. “Last season has been brutal for the ginners,” opined Steve Moffett, Senior Vice President at Lubbock Electric. In his over four decades in the industry, Moffett stated that the drought last year coupled with inflationary pressures have put the cotton sector under stress. Many gins did not run at their full capacity indicating less economic activity in the High Plains of Texas.

This season, the industry is hoping for rains soon in the High Plains of Texas. “If the weather does not cooperate, the industry will have different trajectory,” stated Stoney Jackson, President of Lubbock-based Texas Agribusiness Insurance, who has been in the insurance business for 44 years. If the situation persists, lot of small gins may close and we may see more consolidation, added Jackson.

Sales of new clothing is not happening due to economic factors. “In a weak economy, people buy food and not clothes,” stated Stoney Jackson. Insurance and inputs costs are going up, which again adds stress to the sector. In last few years, due to increase in insurance claims, premiums are going up as high as 30-60%, which puts stress on the industry making it unviable in challenging times, added Stoney Jackson. Irrigated acres may permanently switch to food crops such as corn and milo, added Jackson.

The industry is hoping that with timely rains in Texas and good handle on the inflation, there may be a turnaround for the cotton and textiles sector.



Shankar Venkatachalam (Left) with Seshadri Ramkumar (Right)

Where is Cotton Market Heading?

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, March 29, 2023)—Uncertainty is ruling the cotton landscape.

With all eyes on USDA's 2023 prospective planting report to be released on Friday, March 31, 2023, a general sentiment among stakeholders is that cotton producers in the United States are expected to plant less than what was planted in 2022.

In my interactions on March 28, 2023 with producers and economists at the 66th Annual meeting of the Plains Cotton Growers, Inc in Lubbock, Texas, cotton planting decisions will be predominantly determined by rain and the weather during the planting season.

As cotton is based on discretionary spending by consumers, global and regional economies also play their roles in how the landscape will shift.

China remains a dominant player in the cotton and textile marketplace. With not much transparency in the data coming out of China, it is hard to judge the actual situation about spending revival there.

Geopolitical situation, market volatility, weather in Texas, and economy will all have their respective roles to play in the global cotton situation, as pointed out by Martin Stoerner, President of Lubbock-based Plains Cotton Growers, Inc.

With inflation in the United States still lingering at 5%, interest rate hikes may be expected which may tighten spending, influencing retail sales and hence the demand of non-essential commodities.

Economy and weather are key influencers this season and may be visible in the planting intention report to be published this Friday by the United States Department of Agriculture.

Ramkumar, S

Subject: FW: TexSnips: Where is Cotton Market Heading?

From: Ivars Circenis <>
Sent: Wednesday, March 29, 2023 12:59 PM
To: Ramkumar, S <S.Ramkumar@ttu.edu>
Subject: RE: TexSnips: Where is Cotton Market Heading?

This email originated outside TTU. Please [exercise caution!](#)

Dear Dr. Seshadri,

Thank you for the excellent summary. Many unknown variables at this time.

Best regards,

Ivars Circenis
Intermodal Sales Manager

8189 S Central Expressway | Dallas, TX 75241

www.forward-intermodal.com



We have increased our daily chassis rental surcharge to \$45/day, effective 11/15/2022. A full list of our updated [accessorial charges can be found here.](#)

From: TexSnips@ttu.edu <TexSnips@ttu.edu>
Sent: Wednesday, March 29, 2023 12:54 PM
To: Ivars Circenis <ivars.circenis@forwardair.com>
Subject: TexSnips: Where is Cotton Market Heading?

** This mail has been sent from an external source. Treat hyperlinks and attachments in this email with caution**

Where is Cotton Market Heading?

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, March 29, 2023)—Uncertainty is ruling the cotton landscape.

With all eyes on USDA's 2023 prospective planting report to be released on Friday, March 31, 2023, a general sentiment among stakeholders is that cotton producers in the United States are expected to plant less than what was planted in 2022.

In my interactions on March 28, 2023 with producers and economists at the 66th Annual meeting of the Plains Cotton Growers, Inc in Lubbock, Texas, cotton planting decisions will be predominantly determined by rain and the weather during the planting season.

Sustainable Textiles Sector Needs Skill Enhancement

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, March 20, 2023)--Textile sector is taking sustainability seriously towards its growth.

On March 17, 2023 at wee hours (2 AM USA-CST), I delivered remarks virtually in the invited panel discussion on the “Skilled Workforce for Sustainable Growth,” organized as part of 3rd Global Textile Conclave conducted by the Confederation of Indian Textile Industry (CITI) in Jaipur, India.

I articulated the need for 3Ps for sustainable growth and skill development. The 3Ps are: 1) People; 2) Planning and 3) Progress. The industry must adopt 4S towards training the next-generation workforce. The 4s are: 1) Sensing the need of the industry; 2) Shaping the field; 2) Shielding and building resources and 4) Sustaining the sector and then growing. As India expects to have a textile market size of US\$350 billion in the next few years, training skilled workforce is critically important.

The talk on 3Ps and 4S is available at: <https://www.youtube.com/watch?v=1ze-zxTQ7VY>

Emphasizing the need for nationally recognized training modules, the training program developed by India’s Textile Sector Skill Council (TSC) will be more valuable to SMEs who may not have inhouse training centers, stated Dr. J. V. Rao, Advisor for the Council.

Private sector needs to take the lead in such skill development initiatives with support from the government. In United States, States have programs such as the Skill Development Fund of Texas that enable industry to take a lead in creating public-private partnerships to tackle skill gaps faced by the industry.

In addition to technical skill gaps, industry and skill councils need to focus on soft skills enhancement, safety, and ethics training. Ms. Bia Cunha of the International Labor Organization emphasized the importance of linkages with the private sector and the need to enhance digital skills in the industry.

Skill councils also have to focus on outreach and awareness activities on critical issues facing the textile value chain such as plastic contamination in cotton, enhancing the yield and quality of cotton in countries like India. Enhancing awareness also involves working with stakeholders to train the workforce in the industry to be aware of pressing issues and finding solutions to problems such as contamination in farms and cotton ginning industry.

“India’s Textile Sector Skill Council is developing standardized educational modules which are recognized by the industry,” stated Dr. Swapna Mishra, Chief Operating Officer of the Council. Since its inception in 2014, over 350,000 people have gone through various training programs, which are well received by the industry, added Dr. Mishra.

Skill enhancement, awareness and outreach initiatives are needed globally for the sustainability side of the fiber-fashion value chain. The industry must take lead in this initiative with help from workforce development organizations to prepare the workforce for the advanced and sustainable textiles sector.

Technical Textiles for Health and Environment

By: Seshadri Ramkumar, Professor, Texas Tech university, USA

(Lubbock, USA, March 14, 2023)---Manufacturing sector is gaining attention worldwide due to the recent economic situation and supply chain issues.

Recently, United States, United Kingdom and Australia formed the AUKUS nuclear submarine partnership, which will boost jobs as well S & T partnerships in the pacific region. India's Air India's proposed procurement of Boeing and Airbus planes will create many manufacturing and R & D jobs in the United States and France. These are some examples of the revival in manufacturing in developed nations. All these projects involve some form of advanced textiles such as soft composites, PPEs, etc.

Technical textiles sector globally is a growth sector with an annual growth rate of above 5 percent. On February 26, 2023, I had an opportunity to present the usefulness of advanced textiles in enhancing human lives, saving the environment, and creating jobs to a global audience at the recently concluded World Textile Conference-3 organized by the world's largest professional association in the field of textiles, Textile Association (India) [TAI].

The talk featured the demonstration of a cotton-based oil absorbent and emphasized the importance of developing value-added textiles to enhance human life and protect the environment. I pitched the concept developed by U.S. Department of Defense that involves 4S for the growth of the industry: Sensing; Shaping; Sustaining and Shielding (Growing). The sector can sense the need of technologies and products, map the requirements, build, and grow. There is a need to involve more sustainable products and processes to combat global warming.

There is more work to do in the technical textiles sector to develop technologies and products in a cost-effective way to include sustainable aspects. Developing economies need marketing help in this sector.

In the audience were Tony Fragnito, President of USA-based INDA, Dr. Bryan Haynes, Chairman of the Board of INDA-USA. Dr. P R. Roy, former Group CEO of Arvind Group, Dr. Jaywant Irkhede, Department of Trade and Industry, Republic of South Africa, the office bearers of Textile Association (India) and many other participants representing all walks of the textile industry from fiber to fashion.

The conference attracted over 800 participants who were from India, USA, Germany, Switzerland, South Africa and Uganda.

The talk can be found at:

<https://www.youtube.com/watch?v=4ulh-gvUGOQ>

Impactful Cotton Research

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, March 06, 2023)---Importance of science and technology is gaining mainstream attention.

The ongoing war in Europe and the supply issues related to semiconductor chips have created an awareness among different governments to increase support for R and D.

Today, March 6, when the United Kingdom unveiled its Science and Technology Framework-2030, it was refreshing to interact with a group of 5th grade students at Roscoe Wilson Elementary School, in Lubbock, USA on the research for saving the planet.

Six 5th grade students under the direction of Ms. Keegan Rodriguez are working on a science exhibition project to showcase the negative impacts of plastic pollution. While researching on the subject, our research on cotton as an alternative to absorb toxic oil caught their attention and wanted to interact with me to gain more information.



The young students have prepared important questions on the need for sustainable materials as substitutes for plastic materials to protect the environment. As part of the 20 minutes interaction, it was heartening to note that the questions focused on the motivation of research, commercialization of technology, etc.

Conall Bates, a 5th grade student whose family farms in Hereford, TX asked to explain how cotton is advantageous compared to synthetic materials in absorbing oil. Such questions clearly point to the fact that the students and the community in the High Plains of Texas are well connected with industries such as cotton, oil, and farming.

It is important that research carried out in academia have translational impact and serve the society and the whole world.

Schools such as those in Lubbock Independent School District are doing their best to cultivate interest in S & T in young children, which is the need of the hour. The students are planning to present their study based on the interview and other research in an exhibition to be organized by the school on May 22, 2023.

Schools such as those in Lubbock Independent School District are doing their best to cultivate interest in S & T in young children, which is the need of the hour. The students are planning to present their study based on the interview and other research in an exhibition to be organized by the school on May 22, 2023.

Bio-based materials that can save lives and protect the environment needs support from government funding agencies in addition to industry support.

Research conducted in our laboratory that is gaining attention among elementary school children and the public is indeed a good and impactful outcome.

Science is well and alive in the United States is the take home message I got.

Textile Symphony in Ahmedabad-India

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, February 28, 2023)---Global textile industry stakeholders gathered over the weekend in Ahmedabad for a technology symphony to deliberate on the way forward the sector.

Over 800 delegates representing different countries like India, United States, Germany, Switzerland, South Africa and Uganda participated in the World Textile Conference-3, organized by Textile Association (India) [TAI], that focused on the entire textile value chain from cotton to industrial textiles to marketing. “We have organized this major event to be of service to the global textile sector in this critical time period,” stated Mahendrabhai Patel, Honorary Secretary of TAI.

The conference received the highest attention and was inaugurated by Honorable Bhupendrabhai Patel, Chief Minister of the State of Gujarat in the presence of Honorable Mrs. Darshana Jardosh, Union Minister of State for Textiles & Railways, India. Tony Fragnito, President of the USA-based Association of the Nonwoven Fabrics Industry (INDA) attended the event all the way from Cary, USA.



Photo Caption: Honorable Chief Minister of Gujarat Inaugurating the Event by Lighting the Lamp

As is the case with Beethoven’s 5th Symphony set on four movements with vibrancy, tempo and melody, the conference focused on four notes: 1) Economy and textile sector; 2) Growth and fiber balance (Natural vs. Synthetics); 3) Sustainability and Innovation and 4) Training Next Generation and Research.

“Growth in manufacturing is happening in the APAC region and India is important in this equation,” stated Bryan Haynes, Technical Director Global Nonwovens of Kimberly-Clark, who traveled all the way from the United States for this conference.

“Post COVID-19 era is experiencing the shift in global growth equation, supply chain issues and skilled labor issues. Hence there is a need to re-strategize,” stated Dr. P. R. Roy, Ex-CEO of Arvind Group and the Founder of Ahmedabad-based Diagonal Consulting.

Leaders from leading fiber companies such as Indorama and Reliance discussed the availability of fibers for the Indian industry which will be requiring about 20 million tons in the next 3-4 years. Effective utilization of resources like fibers is critical for the sector. Cotton Council International’s presentation focused on the services provided to better utilize United States’ cotton.

As is the case with Beethoven's 5th Symphony set on four movements with vibrancy, tempo and melody, the conference focused on four notes: 1) Economy and textile sector; 2) Growth and fiber balance (Natural vs. Synthetics); 3) Sustainability and Innovation and 4) Training Next Generation and Research.

"Growth in manufacturing is happening in the APAC region and India is important in this equation," stated Bryan Haynes, Technical Director Global Nonwovens of Kimberly-Clark, who traveled all the way from the United States for this conference.

"Post COVID-19 era is experiencing the shift in global growth equation, supply chain issues and skilled labor issues. Hence there is a need to re-strategize," stated Dr. P. R. Roy, Ex-CEO of Arvind Group and the Founder of Ahmedabad-based Diagonal Consulting.

Leaders from leading fiber companies such as Indorama and Reliance discussed the availability of fibers for the Indian industry which will be requiring about 20 million tons in the next 3-4 years. Effective utilization of resources like fibers is critical for the sector. Cotton Council International's presentation focused on the services provided to better utilize United States' cotton.

The need to collaborate more with institutes of research and higher learning has become important to gear-up innovation. "We focused on obtaining more industry participation in this event. 40 different companies ranging from fiber to hygiene products participated in this conference," stated Tulsibhai Patel, Vice President of TAI.

Major themes that occupied most discussions revolved around fiber needs, sustainability, plastic issues, technical textiles, and modernization. "India needs to grow big in technical textiles and plan strategies for Indian companies to penetrate into this burgeoning sector," opined Nirav Shah, Co-founder of Diagonal Consulting.

"Textile sector needs to focus now on modernization such as improving the quality of cotton, aiming at contamination free fibers instead of expansion," stated Velmurugan Shanmugam, General Manager of Aruppukkottai-based Jayalakshmi Textiles.

An important theme that came again and again like repeating motifs in a concert was the need for skilled next-generation workforce and creating more awareness on emerging technologies.

"Indian textile sector needs more information on practical knowledge and project details on technical textiles," stated Gandhiraj Krishnasamy, Honorary Secretary of the South India Unit of TAI.

As is the case with international symphony events, the textile conference was conducted in a massive auditorium Dinesh Hall in Ahmedabad, that can seat over 800 people with a world class audio set-up such as the Musikverein in Austria, Vienna.

International Collaborative Face Mask Research Receives Best Paper Award

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, February 11, 2023)---International collaborations in science particularly in areas that have global impact are gaining attention.

In the recent COVID-19 pandemic situation, personnel protective equipment like surgical gowns, face masks, hospital drapes played important roles in offering necessary and added protection to save lives.

Nonwovens and Advanced Materials laboratory at Lubbock-based Texas Tech University (TTU) has stepped in during the need of the hour and has undertaken projects to highlight the usefulness of face masks in controlling the pandemic. A new concept, "FISOR," evolved out of the latest research.

Chennai, India-based Asthagiri Herbal Research Foundation collaborated with the Nonwovens Laboratory at TTU to highlight the accumulation of microbes on face masks and the need to focus more on hygiene. This collaborative paper was published in the flagship peer-reviewed journal, "TAPPI Journal," published by the Technical Association of Pulp and Paper Industry in January 2022.

On February 10, 2023, the paper "Microbial load and proliferation associated with various face mask types and sources during the COVID-19 pandemic," has been recognized as the co-recipient of Best Paper Award for 2022 published in TAPPI Journal. In addition, this work is also recognized as the recipient of half of Honghi Tran prize.

The paper that appeared as Cover Page article in TAPPI Journal can be accessed at:

<https://imisrise.tappi.org/TAPPI/Products/22/JAN/22JAN23.aspx>

While the work focuses on the importance of face masks, the journal notifies that this is the first ever paper in the nonwovens/textiles field to receive the best paper recognition—credible recognition for the growing area of nonwovens.

The authors of this paper are Narasimhan Srinivasan, Meenakshi Balakrishnan, James Ayodeji and Seshadri Ramkumar.

Dr. Narasimhan Srinivasan, Chairman of the Asthagiri Herbal Research Foundation has been a colleague of Nobel laureate Herbert Brown and has undertaken research at Purdue University on hydroboration developing chemical reagents.

According to Dr. Narasimhan, "international collaboration provides resources that are complimentary including research expertise to solve common and global problems."

New areas such as biobased processes and products should provide new avenues for research in textiles and materials science stated Dr. Narasimhan. His research organization is now working on herbal blends that promote immunity, antimicrobial filters, drugs for novel anticancer leads.

Nonwoven and advanced textiles sector can gain much by multidisciplinary approaches involving organic chemistry, natural products chemistry leading to translational research.

Sustainability and Innovations to Shine in the World Textile Conference

By: Seshadri Ramkumar, Professor, Texas Tech University, USA

(Lubbock, USA, January 30, 2023)--- With uncertainty lingering in the globe in terms of political and economic instability in certain regions, there is a need for revival of the manufacturing sector.

Textile manufacturing has received its due spotlight in the COVID-19 times with the development of different PPE materials that can save lives. Textile sector can contribute to the growth of global economy and enable job creation by focusing on diversification, innovations in developing advanced and sustainable products.

A galaxy of international speakers will gather for two days in Ahmedabad during February 25 and 26, 2023 at the World Textile Conference-3 (www.textileassociationindia.org/wtc) organized by world's largest textile related professional organization, Textile Association (India) [TAI].

Keynote on the future of the textiles sector will be presented by Punit Lalbhai, Executive Director of Arvind Industry, a leading textile conglomerate based in Ahmedabad, India.

“With manufacturing sector getting revival in developing nations, countries like India are focusing on advanced textiles. The conference will highlight the need for investments and R and D in value-added textiles. Leading industries like Arvind have diversified into value-added textiles,” stated Mahendrabhai Patel, Hon. Secretary of TAI.

Market outlook and future of nonwovens, including how regulations and innovations are shaping the nonwovens sector will be highlighted by Tony Fragnito, President of USA-based Association of the Nonwoven Fabrics Industry (INDA). Innovation pathways in advanced textiles sector will be presented by Bryan Haynes, Senior Technical Director of Kimberly-Clark Corporation.

Sustainability offers a lot of opportunities as well as challenges for the industry. Professor Seeram Ramakrishna of National University of Singapore will highlight how the industry could adopt circular approaches towards conserving resources and be successful. His talk is highlighting how the textiles have become a leading per capita generator of wastes, which necessitates the need for more commercially viable R & D in this field.

Talks on Cotton Vs. MMF, circularity in the sector, cotton seed developments will be addressed by leading industries such as Reliance, Nuziveedu Seeds, Ltd.

How the textile sector can diversity in the challenging times will be the underlying theme of the global event. Arunkrishna Srinivasan, Director at Jayalakshmi Textiles, India will present how challenges can be met and overcome based on practical approaches such adequate stock maintenance, quality control and new product development.

India will be hosting two major advanced textiles events during this February 22 to 26, with Technotex event sponsored by Government of India and the World Textile Conference organized by the Textile Association (India).

These events are expected to create much needed opportunities and boost confidence in investments in the textile and allied sectors.