



Fibertect is top innovation

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Fibertect, a decontamination technology developed by researchers at Texas Tech University, was one of seven new innovations selected by Cotton Incorporated to show the versatility of the fiber.

The products are highlighted in short vignettes on Cotton Incorporated's Cotton Today website.

In 2005, Seshadri Ramkumar and his team at the Institute of Environmental and Human Health (TIEHH) at Texas Tech leveraged the absorbent capabilities of cotton to create the Fibertect wipe that can absorb and neutralize gases and liquids that might be used in chemical warfare.

"To be recognized by the U.S. cotton industry as one of seven inventions is humbling, as it showcases the practical use of cotton technology developed at Texas Tech," Ramkumar said. "The need for decontamination wipes, such as the kind we've created here at TIEHH, was a top priority for the Department of Defense. Years ago, we began the research, developed a product and met a top national security issue. Now we're finding even more uses for the material."

The process to make Fibertect has received a patent and has been validated for use as a low-cost decontamination wipe for the U.S. military. Also, the wipe's qualities were re-engineered to create a better absorbent material to pick up the "chocolate mousse" oil slicks inundating Gulf Coast beaches following the Deepwater Horizon disaster.

Amit Kapoor is president of First Line Technology, which commercially distributes Fibertect that is manufactured by Hobbs Bonded Fibers Inc. He said that unlike synthetic materials like polypropylene that are currently used in many oil containment booms, Fibertect is made from environmentally friendly raw cotton and carbon.

"This summer, Fibertect was taken to the empty beaches of Grand Isle, La., and then laid out on top of a blob of oil that had settled on the beach," Kapoor said. "It worked very well in absorbing and containing the oil. First Line technology is pleased to take the laboratory technology into marketplace. Fibertect is a platform technology and is finding applications in military and oil spill situations."

Kater Hake, vice president of agricultural and environmental research at Cotton Incorporated, said cotton has been essentially a source of textile fiber for six millennia. However, creative organizations such as Texas Tech are evolving the use of cotton and, in the process, its future.

"At Cotton Incorporated, we define sustainability as practices that create an environmental, economic and societal benefit," Hake said. "The developments of these organizations certainly address those three tiers of sustainability, and demonstrate the seemingly infinite uses for the cotton plant."

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