

Can cotton ensure better cleanup in oil spill?

TEXAS, USA (Commodity Online): Can cotton serve as a better cleanup medium in oil spills instead of the synthetic non-biodegradable oil containment booms currently deployed in Gulf of Mexico? According to Seshadri Ramkumar, Associate Professor of Nonwoven materials at The Institute of Environmental and Human Health at Texas Tech University, the 'fabric of our lives' may do a better job to absorb the oil spill than the booms made of synthetic material. The boom is placed in the low areas to protect the nearby marsh when water from the ocean flows into it when sea levels are at their highest

Texas Tech university had shot into fame when it created the nonwoven cotton technology that keeps soldiers safe from chemical and biological warfare agents called the decontamination wipe which already has won top awards in USA.

Already, several million feet of the oil-containment booms have been used to capture the oil spilling into the Gulf," said Seshadri Ramkumar, associate professor of Nonwoven materials at The Institute of Environmental and Human Health (TIEHH). "They are made of synthetic materials, don't biodegrade and absorb only a third of what raw cotton can do. The properties of raw cotton allow it to soak up 40 times its weight. With chemical modifications, it can soak up to as much as 70 times its weight. And it won't just stay in a landfill forever."

Ramkumar's research focuses on developing value-added materials using nonwoven materials and nanotechnology. He supervises the Nonwoven and Advanced Materials Laboratory at TIEHH.

He is the creator of several nonwoven cotton technologies including Fibertect™, which is used in the U.S. military's decontamination kits. He and a small group of his graduate students are researching ways to use lower-quality cottons that don't make apparel grade for uses such as this.

"The nonwoven industry in the United States is well equipped with technologies that can develop oil-absorbent pads from natural fibers like cotton," Ramkumar said.