UPDATE: Watch Video on How Cotton Could Serve as Oil Spill Cleanup Medium

May 18, 2010

Nonwoven cotton expert Seshadri Ramkumar believes raw cotton is a better material for oil absorbency.

UPDATE: Texas Tech recently released a video demonstrating the absorbent technology cotton offers to the oil spill disaster. Click here to watch the video.

Cotton could be a better absorbent than the oil-containment booms (pictured above) that are currently being used to absorb the oil spilling into the Gulf. *Photo courtesy of Deepwater Horizon Response*.

The same Texas Tech-created nonwoven cotton technology that keeps soldiers safe from chemical and biological warfare agents may also serve as the perfect sponge for sopping up oil that has polluted the Gulf of Mexico.

As oil continues to gush from the exploded Deepwater Horizon oil rig, a Texas Tech expert in nonwoven cotton technology says the “fabric of our lives” may do a better job to absorb the oil spill than the booms made of synthetic material.

“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 FibertectTM, 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.

Comments:

Submitted by: Stanley Anthony
May 19, 2010
Cotton indeed is an excellent absorbent material for oil/ In fact, when cotton is added to a mixture of oil and water, the oil is absorbed and the water is left clear. Oil even displaces water in wet cotton. These comments are based on research at teh U.S. Cotton Ginning Lab at Stoneville in the 1990/s.

Stanley Anthony, 662-820-1581

Submitted by: Stanley Anthony
May 19, 2010
Reference information is in the following publications: 1. Anthony, W. S. Absorption of oil with cotton products and kenaf. ASAE Paper No. 926542. 14 pp. 1992.

2. Anthony, W. S. Potential for oil absorption of gin by?;products. Proc. Beltwide Cotton Conf. pp. 1400?;1402. National Cotton Council, Memphis, TN. 1992.

3. Anthony, W.S. Absorption of oil with cotton products and kenaf. Applied Engineering in Agriculture. 10 (3):357-361. American Society of Agricultural Engineers. 1994.

Submitted by: Susan Baggett
May 25, 2010
Does anyone know how much cotton would be available to use to remediate the oil spill?

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