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Stopping Uyghur Forced Labor Imports: A Made-in-America Solution

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Almost exactly a year ago, the Congress with a unanimous vote passed the [Uyghur Forced Labor Prevention Act \(UFLPA\)](#). No partisan divide exists with the American people: they want forced labor out of their imported products, and are especially concerned by the human rights violations against the Muslim minorities of the [Xinjiang](#) Uyghur Autonomous Region of China, which both the Trump and Biden Administrations have determined to be a [genocide](#).

During consideration of the Uyghur legislation, Members of Congress showed diminishing sympathy for arguments about how complicated it is to stop such tainted products from being imported. Key sponsors of the UFLPA recently communicated impatience with suggestions being floated by some importers

to [shield certain import data](#), which if adopted could undercut enforcement of the UFLPA.

Many enforcement challenges remain. For example, Chinese fast-fashion e-retailer Shein [was found shipping products into the United States containing Xinjiang cotton](#).

Notably, the UFLPA requires the Biden Administration and especially Customs and Border Protection (CBP) to work on innovative implementation methods, and Congress backed up its directive with additional funding for CBP. When it comes to UFLPA implementation, [technology solutions](#) are now front and center – and they come in two versions.

One approach is the software platforms based on publicly available or documentary information, including supply-chain mapping, data analytics and blockchains. Such solutions appear well understood and accepted by CBP, an agency that traditionally enforces based on documentary trails, whether paper or electronic. Indeed, these software technologies can be useful tools for the tracking of goods within a supply chain and identifying potential risks.

But such software solutions do not verify the origin of products or commodities from a test physically performed and connected to the item itself. So if the paper trail has been adulterated or counterfeited, the software pedigree of an item is unreliable. That is where the second type of technology solutions can fill the void.

With the direction of Congress, CBP has begun to embrace forensic technology capabilities. One of these is the use of isotopic analysis, which is based on the geographic distribution of isotopes of hydrogen, carbon and oxygen in the earth, and which can allow laboratory-based testing to identify geographic origin. This approach is being used to test [cotton](#) origin, a UFLPA priority, as China reportedly accounts for near 20 percent of [global cotton production](#), and the Xinjiang region almost all of it.

The second forensic technology applicable to UFLPA compliance involves the use of PCR-technology to analyze the DNA of materials. DNA has been used and proven for over a decade in cotton type and origin tracing. Just as DNA and PCR technologies allow for tests to distinguish strains of COVID from slight DNA variations, the same approach can test cotton fibers for the unique DNA sequences associated with different geographic regions, or to identify small DNA sequences applied to the fibers at a cotton gin or yarn spinner.

As the Wall Street Journal just reported, DHS officials have begun to look at applying DNA tracing technology to UFLPA enforcement, and in meetings with apparel industry representatives, a senior CBP official recently mentioned the possibility for DNA technology to assist as a “potential magic wand” with the UFLPA compliance challenge.

In fact, DNA has an established record of being used commercially as an external molecular tag already applied to almost half a billion pounds of cotton. DNA tags placed in fiber at the cotton gin are verified all the way to a finished item, thereby confirming the supply chain of the cotton. DNA testing can be done on a pre-shipment basis with mobile devices providing results in under an hour (think rapid Covid tests).

The combination of the forensic technologies of DNA verification and isotopic analysis is the surest way to establish authenticity and geographic origin. These scientific validations of an item’s origin by tests of the product itself are an essential complement to the software technologies now being broadly embraced.

Fortunately, the United States has the world’s leading companies in both isotopic analysis and DNA tracing. One year on, the Congress and Biden Administration still have much to do to implement the UFLPA, and supply chain authentication and security more broadly. The opportunity for a public-private partnership to stop the importation of Xinjiang cotton is certainly within grasp—the technology exists, is already in use, and will be quickly scaled and embraced by the private sector with supportive government policies.

As the Congress concludes its work for 2022, the final funding allocated to implement the UFLPA can be further targeted to reinforce CBP’s emerging embrace of forensic DNA technology and to develop a Made-in-America compliance solution.

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