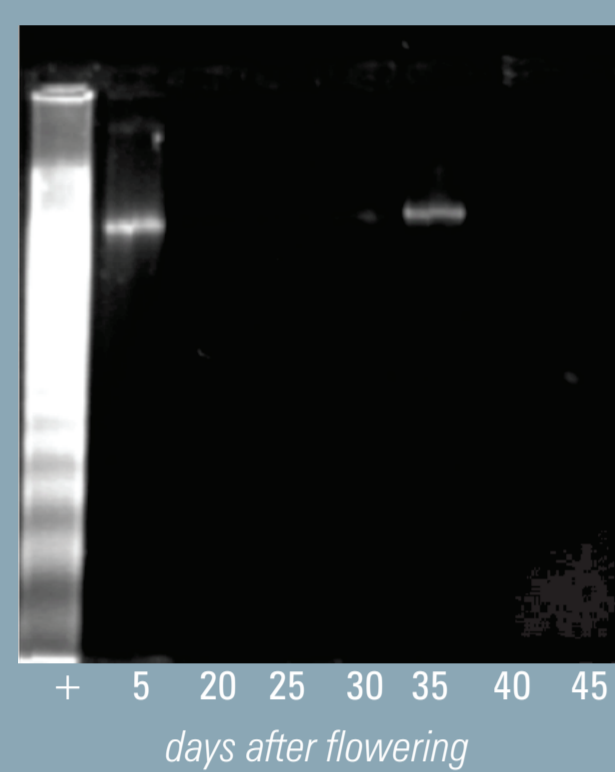


“Dx: Diagnostic” 

fiberTyping® – a “diagnostic” system that includes DNA extraction, testing and analytical reporting of cotton-based products; in fiber, yarn, fabric and finished goods.

Programmed Cell Death in Cotton Destroys Nuclear DNA After Flowering

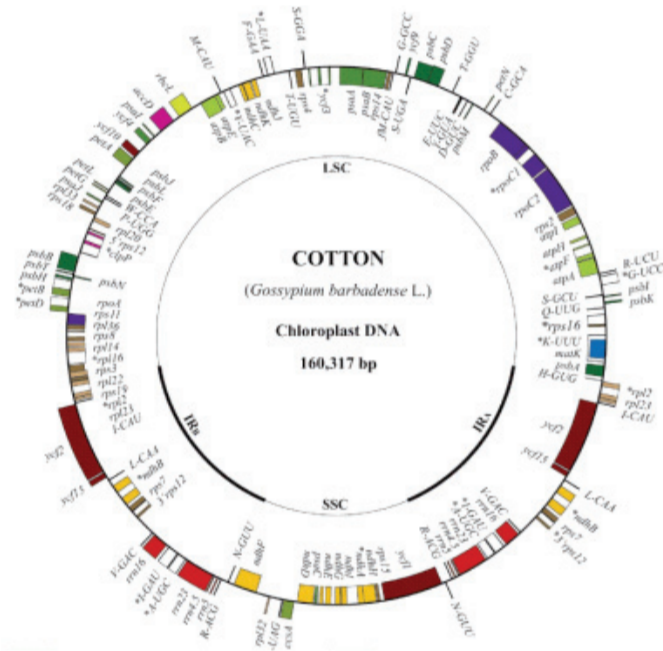


- At 40 days after flowering
- No nuclear DNA remains due to digestion by nuclear enzymes after cell death
 - Nuclear DNA destruction continues until no DNA remains
 - Cotton is picked ≥ 50 days after flowering
 - Analysis of the species of origin must be done hundreds or thousands of days later
 - Nuclear DNA is not available in commercial cotton

Data of Meghan Roche, Texas A&M

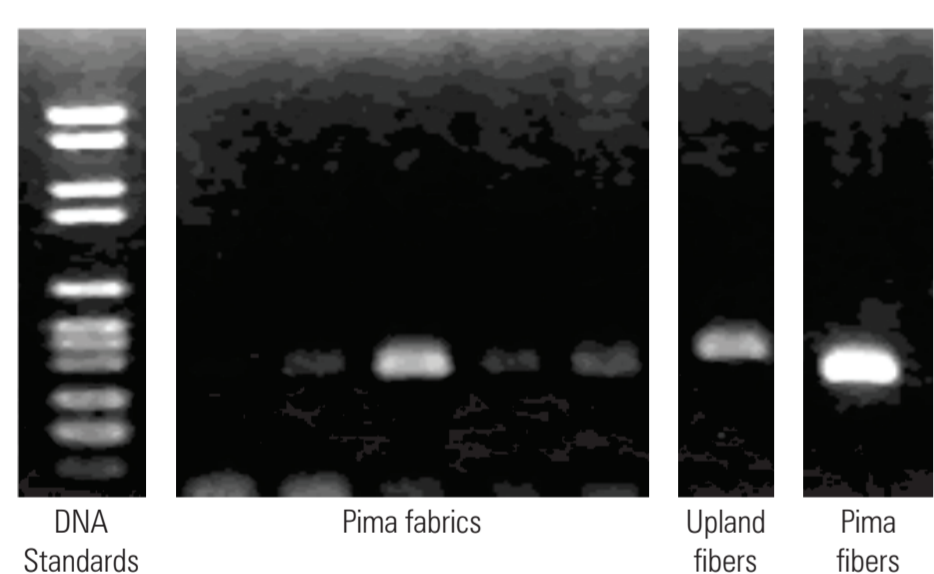
- Applied DNA Sciences’ scientists made an important discovery - survival of non-nuclear DNA from mature cotton fibers.
- Patented technology (US Patents: # 8,669,079 and #8,940,485).
- 8 years used in cotton testing and commercially validated.

Mining the Cotton Chloroplast Genome



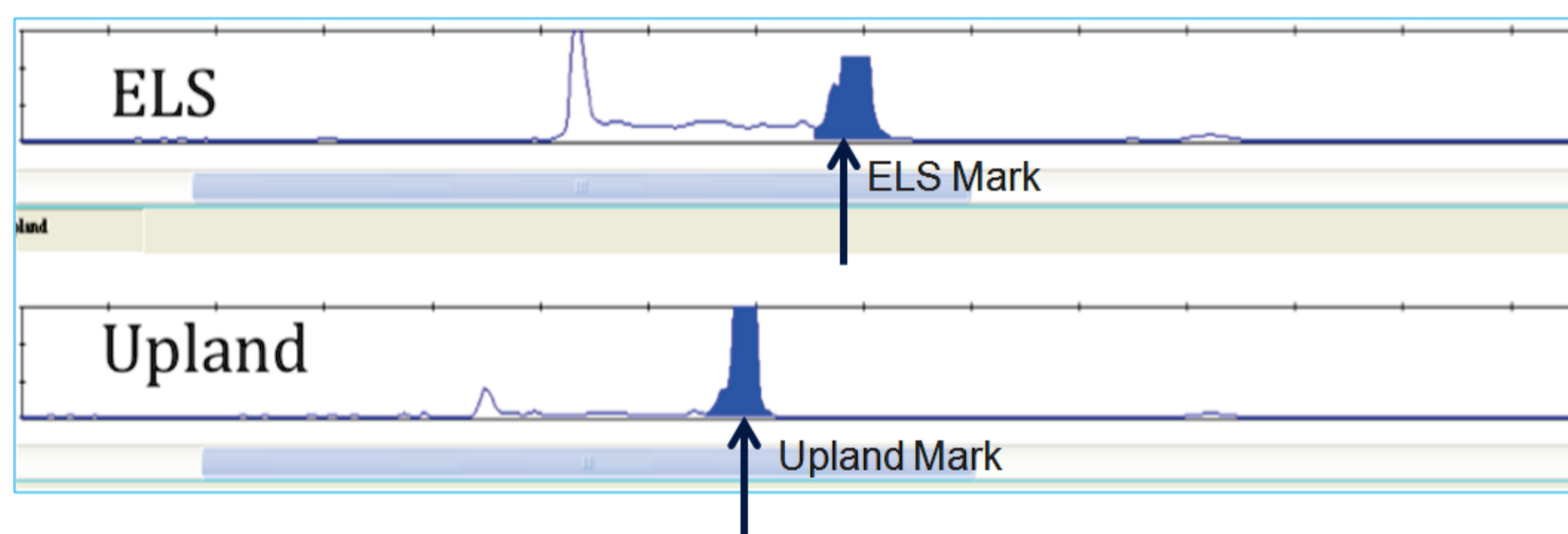
APDN scientists analyzed cotton chloroplast genomes to identify regions most likely to differ between cultivars (the DNA that is not highly conserved by evolution).

The ADNAS Discovery

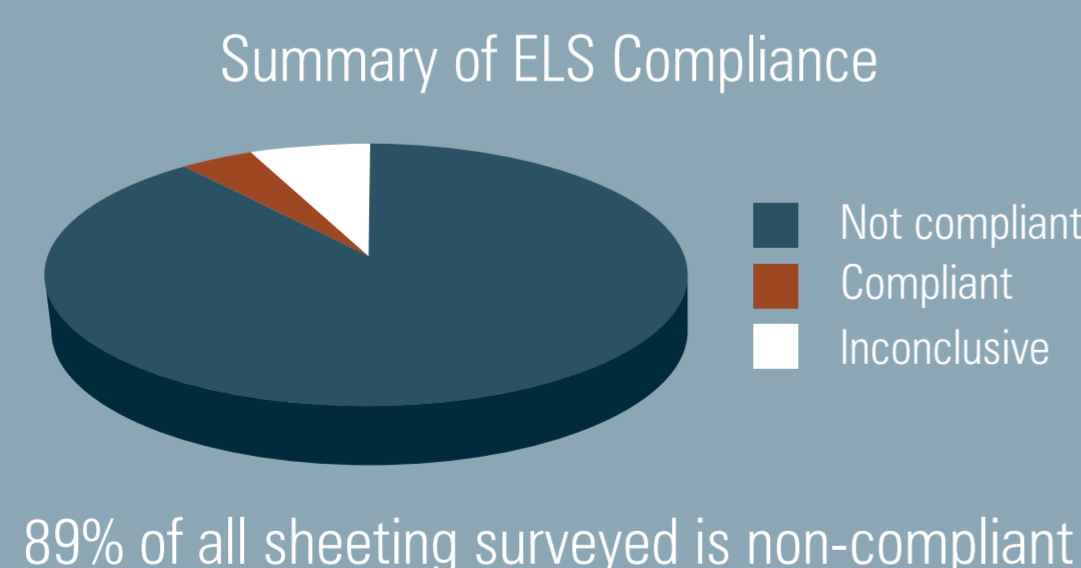


Biggest discovery of all. Cotton fiber lineage is preserved in finished Pima cotton textiles.

Patented DNA Genotyping Test



Dx Market Tests Show 89% Non-Compliant products!



REVOLUTIONIZING COTTON

from Dx to Rx:

curing cotton supply chains

Presented by Jo Greenwood, Ph.D.
Technical Director, EMEA
Applied DNA Sciences, Inc.



“Rx: Therapeutic” 

SigNature® T – a “therapeutic” system that provides traceability and proof-of-origin, and identity for product claims (e.g., organic, sustainably grown, grown in Egypt).

- Patented and proprietary methods developed exclusively by Applied DNA Sciences in Stony Brook, New York.
- Botanically-derived, cannot be copied.
- Secure chain of custody, backed by forensic authentication testing.
- ISO 9001 certified, and ISO 17025 lab accredited.

SigNature T Stays Bound



Raw ELS cotton was placed on conveyor belt and sprayed with SigNature® T during the hydration step in the ginning process. After baling, samples were randomly selected to assess marking efficiency. SigNature T was consistently recovered from multiple, individual cotton fibers.

SigNature T Survives Textile Processes

SigNature T Verified In-Field



- Patented rapid tests yield forensic proof of DNA in 11 minutes.



- Applied DNA Sciences and USDA have a contractual collaboration to genotype and discriminate > 70 global cultivars of cotton.

- Since many of these cultivars are grown in isolated geographies, the resultant discrimination power will result in a kind of “geotyping.”

Rx Proof: SigNature T Secures Supply Chains from Fiber to Finished Goods

- Over 100 million lbs of cotton tagged since 2014.
- Commercially used by brands, retailers, manufacturers, merchants and growers to ensure cotton supply chains are pure.
- DNA-clarified supply chains deliver 100% of the intended product.
- DNA-verified finished goods outperform the competition.