

	BASF e3	
GENERAL		
Objective	To create a more sustainable American landscape.	To create more sustainable, traceable cotton.
Overview	e3™ is BASF CropScience's more sustainable cotton option. It is grown in the U.S.A. with care by cotton producers striving to improve their sustainability in production of the highest-quality upland cotton for apparel and home furnishings.	The REEL Cotton Programme is a 3-year modular program for farmers with Sustainable Agricultural Practices (SAP) at its core. It has four key focus areas: - Agronomic training - Social mobility and engagement - Supply chain verification - Brand reputation
PRODUCTION		
Producing Countries (2017/18 unless otherwise stated)	USA	China, India, Pakistan, Peru.
Fiber Production 2017/18 (MT)	22852	20,188
Market Share of Total Cotton Grown (2017/18)	0.09%	0.08%
Growth in production (2016/17 - 2017/18)	52% Decrease	33% decrease
Projected growth in production	5%	Projected increase
Yield (see accompanying "TE Position" notes)	754/lb per acre to more than 2,000/lb per acre [138 kg/ha to 367 kg/ha]	9.4% average yield increase among REEL farmers compared with control farmers
ENVIRONMENTAL - WATER		
Rainfed / Irrigated	Combination	Mostly irrigated (rainfed in some regions)
Water Management	Aims to reduce irrigation water use.	Promotes water efficiency. 12.5% average reduction in water use compared with control farmers. The REEL Cotton Code requires water
Water Consumption (m3 / 1000kg fiber*) or best practices used to conserve water	36% of e3 producers use drip irrigation or low pressure sprinklers and flow meters. At least 73% of e3 producers practice residue management, use cover crops, mulching, or other evaporation prevention measures	No LCA data
ENVIRONMENTAL - LAND / SOIL		
Soil fertility	Promotes soil health and stewardship. Activity is assessed on various factors including land use and soil carbon. Concept based on continuous, measured improvement.	Promotes soil health and nutrient management through crop rotation and composting. REEL Code requires appropriate measures are implemented to increase soil fertility and avoid erosion of the soil.
Biodiversity	Promoted biodiversity conservation. Activity is assessed on various factors including conservation. The concept is to improve one's performance on these various parameters over time.	Promotes the use of bio-pesticides and bio-fertilizers and reduces the use of chemical pesticides and fertilizers. The REEL Cotton Code requires cotton production to respect ecologically sensitive areas by keeping sufficiently sized buffers around cotton fields. Farmers are motivated to plant trees around farms; diversify their production system through crop rotation and intercropping; plant border crops around the cotton field; and take necessary steps to increase beneficial insects on the farms. NB: CottonConnect is conducting a pilot to measure biodiversity and soil health improvements.
Eutrophication (kg of phosphate- eq / 1000 kg fiber *)	79% of e3 producers use grass waterways or filter strips to control water runoff and 46% use vegetative borders to reduce nutrient runoff	No LCA data
ENERGY / TECHNOLOGY		
Use of Hazardous Pesticides	Pesticide use is measured under e3™ guidelines.	REEL farmers are trained in pest management and reduction of
Use of Synthetic Fertilizer	Fertilizer use is measured under e3™ program criteria, along with crop rotation, composting and cover crop usage. 98% of e3™ producers conduct soil test and 94% applied nutrients based on crop & soil needs and/or University recommendations.	REEL farmers trained in composting, crop rotation and reduction in use of chemical fertilizers. Use of chemical pesticides reduced on average by 12.7% compared with control farmers.
GMOs Permitted?	Yes	Yes
Primary Energy Demand (kWh / 1000kg fiber*)	34% of e3 producers use renewable or alternative	No LCA data
Global Warming (kg of CO2-eq / 1000kg fiber*)	92% of e3 producers reduce nitrous oxide	No LCA data
SOCIAL		
Social considerations / regulations	US cotton growers are all held to high standards	Provides training to produce cotton with respect for human rights
Livelihoods	e3™ farmers are paid a small per bale incentive	REEL farmers receive training to increase yield and profit. 7.3%
ASSURANCE		
Verification / Certification (farm level)	Self-evaluation and 3rd party audits.	The REEL Code of conduct is developed by CottonConnect & FLOCERT and verified by FLOCERT (www.flocert.net)
Chain of Custody (supply chain)	CoC to the mill (for further content claims use).	CottonConnect has developed a product called TraceBale, providing
LCA available?	No, but tracking systems are provided via tools	Water consumption; Primary energy demand; Global warming;
Product marketing / labeling	Limited on product marketing.	REEL Cotton products can be labelled as REEL Cotton or using a
Consumer recognition	No data	Primarily business-to-business but instore marketing.
PRICE / QUALITY		
Cost implications/ impacts	Small price differential paid to farmers, negotiated with individual brand/ retailer.	Brand/ retailer pays for service.
Quality perception / implications	No known quality implications.	No known quality implications.