

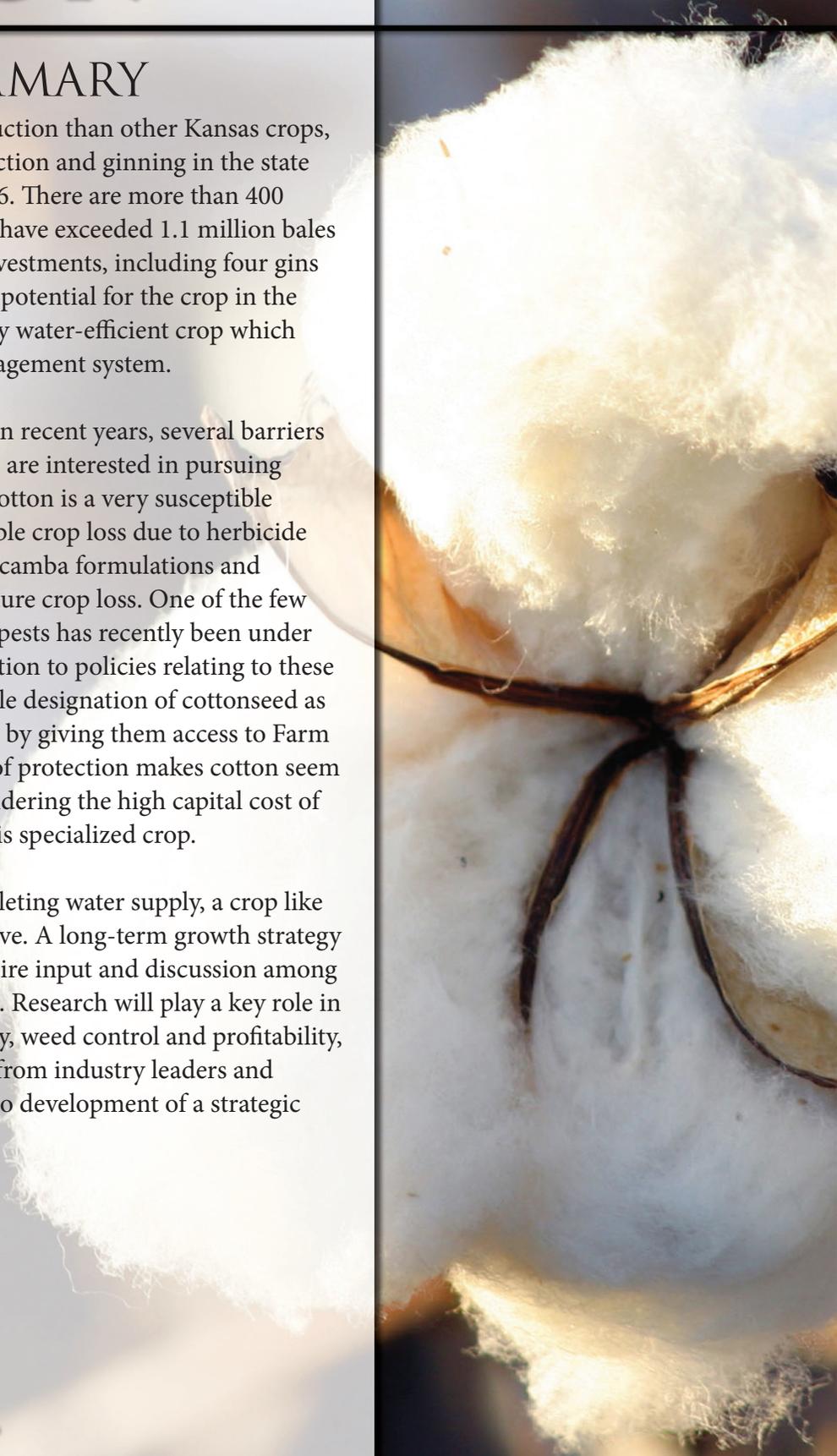
COTTON

EXECUTIVE SUMMARY

The cotton sector is smaller in production than other Kansas crops, ranking 17th nationwide, but production and ginning in the state has increased significantly since 1996. There are more than 400 active cotton growers, who together have exceeded 1.1 million bales since 1996. Several infrastructure investments, including four gins and a warehouse, have extended the potential for the crop in the future. Cotton offers farmers a highly water-efficient crop which works well in part of a rotation management system.

Despite the success cotton has seen in recent years, several barriers still pose challenges for farmers who are interested in pursuing expansion into the cotton market. Cotton is a very susceptible crop to 2,4-D and is subject to possible crop loss due to herbicide drift. Increasing the availability of dicamba formulations and tolerant cotton is key to reducing future crop loss. One of the few pesticides that is effective on cotton pests has recently been under consideration to be revoked. In addition to policies relating to these herbicides and pesticides, the possible designation of cottonseed as an oilseed could help cotton farmers by giving them access to Farm Bill support mechanisms. This lack of protection makes cotton seem a risky option, especially when considering the high capital cost of custom harvesting equipment for this specialized crop.

As we face a future with an ever-depleting water supply, a crop like cotton could be a profitable alternative. A long-term growth strategy to overcome the challenges will require input and discussion among key partners both public and private. Research will play a key role in this plan, examining issues of fertility, weed control and profitability, among others. Collaborative efforts from industry leaders and public organizations will be critical to development of a strategic growth plan.



STATUS

Kansas ranks 17th nationwide in production of cotton, producing less than 1 percent of the nation's cash receipt value of the crop. Although a relatively small percentage of the national total production and ginning in the state has significantly increased since 1996. As of 2013 there were 410 active cotton growers and 838 participating landlords and partners invested in the state.

According to estimates prepared by the Kansas Department of Agriculture and based on the Implan economic data model, the cotton industry in Kansas has a direct output of over \$20.4 million. Through indirect and induced impacts, the industry creates a total economic contribution of approximately \$32.9 million.

Cotton production and ginning in Kansas has exceeded 1.1 million bales since 1996. Significant infrastructure investments, exceeding \$44 million, have been made in Kansas cotton including the establishment of four gins located in Moscow, Pratt, Anthony and Wellington, a 100,000-bale warehouse in Liberal, and more than 80 strippers and other harvest-related equipment. More than \$4.2 million in cash investments have been made in the Plains Cotton Cooperative Association. The number of acres planted has increased from 16,000 acres in 2015 to 56,000 acres in 2017, a 250 percent increase.

OPPORTUNITIES

In order to develop a strategic growth plan for cotton, it is important to understand the areas where Kansas has a comparative advantage and the best opportunities for growth or expansion.

Factor	Implications for Growth and Development Opportunities
Climate	The climate in the southern third of Kansas is well suited for cotton production. Cotton is a perennial plant that is heat-unit sensitive. It requires approximately 1,800 to 2,100 growing degree units for a set boll to open. Once the plant reaches bloom stage, however, the response to heat units is less pronounced and night temperatures and light intensity become critical factors in the plant reaching maturity.
Crop Rotation	Cotton growers in southwest Kansas often include cotton as part of a rotation management system. Including cotton in a rotation with corn or other crops improves the accumulation of crop residue, soil moisture, soil fertility and pest management and provides an opportunity to diversify market opportunities.
Genetics & Herbicide Development	<p>Pending regulatory approval, a weed control system and cotton seed variety has been developed that will reduce crop loss to 2,4-D drift and will improve yields.</p> <p>Kansas participates in DriftWatch, a voluntary communication tool that enables crop producers and pesticide applicators to work together to protect specialty crops. Registering cotton fields and posting information about 2,4-D application may reduce the incidents of loss due to drift.</p>

OPPORTUNITIES

Factor	Implications for Growth and Development Opportunities
Water	<p>Cotton produces more farm-level economic value per inch of water than any other crop in southwest Kansas. Compared to corn, alfalfa and soybeans, profitable cotton yields can be reached under irrigation with roughly one-half to one-third of the water of these crops. As a result, farmers are largely interested in growing cotton on land that has limited well capacity.</p> <p>Kansas is recognized nationwide for its proactive practices of conserving water for future generations.</p> <p>Kansas has existing water rights available and is implementing proactive water conservation practices allowing farmers and ranchers to manage their own water while still preserving the aquifer for generations to come. Kansas has developed a <i>Vision for the Future of Water Supply in Kansas</i>, which aligns the priority of growing the economy with the strategies and actions necessary to ensure a reliable water supply is available to support that growth. Several action items within the Vision call for opportunities to address the policy and research challenges associated with increasing cotton acres in Kansas.</p>

SUCCESS STORIES

The cotton growers' community in Kansas has made significant strides in increasing acreage, advocating for policy and research and increasing the education and awareness of cotton's potential in Kansas. Some specific successes include:

- Several action items supporting cotton were included in the Kansas Water Vision.
- The state currently maintains four cotton gins and a cotton warehouse facility.
- Kansas cotton growers are represented in leadership roles on national and regional advocacy organizations.
- Kansas has established partnerships with leaders in Texas and other high-acreage cotton states.
- An economic study between Kansas Cotton and K-State estimating profitability of growing irrigated cotton in Kansas is nearing completion.

CHALLENGES

While Kansas is poised for expansion of production and processing of cotton, the following factors represent challenges serving as barriers to achieving the objective of the cotton growth plan.

Challenge	Details of Challenge
2,4-D Loss	<p>Cotton is considered one of the most susceptible agricultural crops to 2,4-D. In 2013, an estimated \$6.1 million of cotton crop loss in Kansas could be attributed to the drift of 2,4-D. Damage was observed in every cotton field in Seward, Stevens, Grant, Haskell, Meade and Gray counties.</p> <p>While Kansas participates in Driftwatch, there is no regulatory requirement to register fields or pesticide and herbicide applications. Kansas has no pesticide or herbicide drift laws.</p>

CHALLENGES

Challenge	Details of Challenge
Chlorpyrifos	<p>In fall 2015, the Environmental Protection Agency issued a proposal to revoke all tolerances for chlorpyrifos. Chlorpyrifos is used on cotton to control aphids and similar pests. It is one of the few remaining crop protection products that provides a broad spectrum of control for multiple insect pests. Without control of these pests, farmers can sustain yield loss and quality loss. Cotton industry groups have requested that the EPA consider all submitted studies and reverse its final decisions.</p>
Critical Infrastructure	<p>Cotton harvesting equipment including cotton pickers and cotton strippers present the challenge of high capital costs. With limited acres in Kansas compared to other crops, cotton growers are faced with the high investment in equipment or reliance on custom harvesting.</p> <p>Time to market is a premium consideration for cotton so any opportunity to reduce transport time adds value to the product. Reducing time to market could be achieved through the development of rail spurs in southwest Kansas and by increasing the width of Highway 54 — one of the primary routes between acres, gins and the bale warehouse.</p>
International Trade	<p>According to the 2015 edition of <i>Cotton Counts Its Trade</i>, the top five export customers of raw cotton fiber are China, Turkey, Vietnam, Mexico and Indonesia. Of those, Indonesia and Vietnam have seen an increase in imported cotton while cotton imports to China have decreased. Export potential exists for any country experiencing growth in its GDP.</p>
Policy	<p>The 2004 World Trade Organization settlement case regarding the Brazil–United States cotton dispute on the issue of unfair subsidies on cotton found that the U.S. support for its cotton industry was inconsistent with its obligations under the Subsidies and Countervailing Measures (SCM) Agreement. The settlement continues to impact cotton’s status in the Agricultural Act of 2014 (Farm Bill). Cotton is not a covered commodity under the Farm Bill so it lacks the Price Loss Protection or Agricultural Risk Coverage afforded to other commodities such as corn, soybeans and wheat. Cotton growers have to rely on insurance products (Stacked Income Protection [STAX] Program) in the absence of other Farm Bill support mechanisms. While restoring cotton as a Title I commodity under the next Farm Bill is a more long-term resolution to this issue, designating cotton in the “other oilseed” category offers an alternative for improved coverage under existing commodity programs.</p>

CHALLENGES

Challenge	Details of Challenge
Water	Even with focused implementation of the Kansas Water Vision, declines in the Ogallala aquifer will continue to be a challenge for all production agriculture in Kansas.
Workforce Development	Workforce development issues impacting the cotton industry in Kansas relate to affordable and qualified custom harvesting.

NEXT STEPS IN STRATEGIC DEVELOPMENT

Leaders from throughout the Kansas cotton industry will continue to collaborate in the development and implementation of a long-term strategic growth strategy with input and discussion among key partners. Industry-identified desired growth outcomes, initially developed in 2016, will be implemented by industry and key partners and updated annually at the Kansas Governor's Summit on Agricultural Growth.

COTTON INDUSTRY OUTCOMES



Growth Objective:

Expand cotton's role as an integral part of meeting the vision for the future of the state's water supply, and grow to be one of the top 10 cotton-producing states within the next 10 years.

The following outcomes will be the result of industry collaboration and effort to grow the Kansas cotton industry:

Phase 1 (Begin within two years)

- Implementation of action items in the *Vision for the Future of Water Supply in Kansas* related to cotton and herbicide, establishing cotton as a water management crop alternative and leading to a longer usable life for Kansas groundwater and surface water sources.
- Availability of direct enrollment in Driftwatch program for local gins or co-ops.
- Adequate access to supplies of shorter season EnlistDuo Phytogen cottonseed for Kansas growers.
- Predominant use of 2,4-D tolerant cotton varieties by Kansas growers. Misunderstandings currently exist related to the distinction between 2,4-D tolerance and dicamba tolerance.
- General understanding of the role of 2,4-D tolerant cotton varieties by both cotton growers and non-cotton growers. Increased information and education for both cotton growers and non-cotton growers can reduce neighbor-to-neighbor concerns about cotton acreage near other commodities.
- Inclusion of cotton as a Title I Commodity in the Farm Bill allowing for improved insurance coverage. The outcome of a 2004 World Trade Organization settlement case impacted cotton's status under the Farm Bill; as a result, cotton is not a covered commodity and lacks coverage afforded to other commodities.
- Broad knowledge of the economic impact of growing irrigated cotton in Kansas, including expanded producer surveys, yield response curves and additional cost data.

Phase 2 (Begin within 2-4 years)

- Widening of Highway 54, one of the primary routes between acres, gins and the bale warehouse, reducing the time to market and adding value to the product.
- Participation of cotton growers in Kansas agricultural trade missions to provide opportunities for increased cotton markets, in coordination with the Cotton Council International.
- Increase in Kansas farmers who include cotton in their crop rotation system as part of an overall water management strategy.
- Affordable access to cotton harvesting equipment in areas of the state with increasing cotton production through cooperatives or other organized approaches.

Items for further consideration

- Increased consumer desire for cotton over polyester and other non-cotton fibers.
- Collaborative research working group to develop a strategic plan that addresses cotton research pitfalls.