



# COTTON

The cotton sector is smaller in production than other Kansas crops, ranking 12th nationwide, but production and ginning in the state has increased significantly since 1996. There are more than 220 active cotton growers, who together have exceeded 2.2 million bales since 1996. Several infrastructure investments, including four gins and two warehouses, have extended the potential for the crop in the future. Cotton offers farmers a highly water-efficient crop which works well as 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 recent years, the status of cotton in the farm bill has varied, creating uncertainty for producers. This lack of certainty 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 12th nationwide in production of cotton. Although a relatively small percentage of the national total, production and ginning in the state has increased significantly since 1996. As of the 2017 Ag Census there were 221 active cotton growers.

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 \$103.6 million. Through indirect and induced impacts, the industry creates a total economic contribution of approximately \$166.1 million.

Cotton production and ginning in Kansas has exceeded 2.2 million bales since 1996. Significant infrastructure investments have been made in Kansas cotton including the establishment of four gins located in Moscow, Pratt, Anthony and Winfield, a warehouse in Liberal, and another warehouse in Clearwater is projected to open in 2021. The number of acres planted has increased from 33,000 acres in 2016 to 195,000 acres in 2020, a 490.9 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
<b>Climate</b>	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.
<b>Crop Rotation</b>	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.
<b>Genetics &amp; Herbicide Development</b>	In 2016, regulatory approval provided for the release and availability of a weed control system and cotton seed variety that will reduce crop loss to 2,4-D drift and will improve yields.  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 herbicide application may reduce the incidents of loss due to drift.

Factor	Implications for Growth and Development Opportunities
<p><b>Water</b></p>	<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 Kansas Water Vision call for opportunities to address the policy and research challenges associated with increasing cotton acres in Kansas.</p>

## 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
<p><b>2,4-D Loss</b></p>	<p>Cotton is considered one of the most susceptible agricultural crops to 2,4-D. While the availability of 2,4-D tolerant seed varieties as well as alternative weed control systems has significantly addressed this challenge, additional information and education is needed for both cotton growers and non-cotton growers to reduce neighbor concerns and clarify the distinction between 2,4-D and dicamba tolerances.</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>
<p><b>Chlorpyrifos</b></p>	<p>In fall 2015, the Environmental Protection Agency issued a proposal to revoke all tolerances for chlorpyrifos. Additionally, in August 2018 the U.S. 9th Circuit Court of Appeals ordered the EPA to ban the sale of chlorpyrifos in the United States. 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>

Challenge	Details of Challenge
<b>International Trade</b>	According to the Foreign Agriculture Service, as of July 2018 the top five export customers of raw cotton fiber are China, Vietnam, Pakistan, Turkey and Bangladesh. Export potential exists for any country experiencing growth in its GDP.
<b>Policy</b>	<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 impacted cotton’s status in the Agricultural Act of 2014 (Farm Bill). Cotton was not a covered commodity under the 2014 Farm Bill.</p> <p>Recognizing the need to provide support to cotton producers, the Bipartisan Budget Act of 2018 amended the Agricultural Act of 2014 and designated seed cotton as a covered commodity. This allowed seed cotton to be eligible for Title I farm programs effective for the 2018-2019 marketing year. Many of the priorities of the cotton industry were included in the 2018 Farm Bill, but there are still several priorities that will be sought in future farm bills.</p>
<b>Water</b>	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.
<b>Workforce Development</b>	Workforce development issues impacting the cotton industry in Kansas relate to affordable and qualified custom harvesting.

# SUCCESSSES

Key successes in the cotton industry:

- The number of cotton acres planted increased to 195,000 acres, a 490.9% percent increase from 2016.
- The Bipartisan Budget Act in 2018 amended the 2014 Farm Bill, adding seed cotton as a covered commodity under the Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) programs.
- In February 2018, the Kansas Cotton Association held informational meetings for new and existing cotton producers in Sublette and Wichita. Over 50 people attended each meeting.
- In March 2018, the USDA's Farm Service Agency announced a new Cotton Ginning Cost Share program. The program provides cotton producers with cost share payments to offset their 2016 cotton ginning costs and to assist with the marketing of cotton.
- Several million dollars has been invested throughout the state in harvesting equipment along with a \$30 million investment in the expansion of three gins.
- Access to shorter season EnlistDuo Phytogen cottonseed has expanded to allow for widespread use by Kansas cotton growers.
- The 2018 Farm Bill includes many of the cotton industry's policy priorities, including continuation of the seed cotton ARC/PLC program, full access to the marketing loan program, full funding for textile competitiveness programs, effective crop insurance products, no reduction in arbitrary payment limits, and addressing restrictive family farm eligibility requirements.
- Plains Cotton Cooperative Association is building a warehouse in Clearwater which is projected to open in 2021. This facility is the second facility in Kansas and will provide another storage option to help alleviate transportation issues.



## Cotton

# 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.*



## OUTCOMES & ACTION ITEMS

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 and expanded to include action items, which will be implemented by industry and key partners and updated annually at the Kansas Governor's Summit on Agricultural Growth. Following are the proposed action items to continue building on the achievement of the cotton sector desired outcomes.

### High Priority Outcomes

**Development of the Kansas Cotton Boll Weevil Eradication Program. The boll weevil is a devastating pest to the cotton plant. The development of a program will establish a formal system for monitoring for and dealing with the boll weevil in Kansas.**

#### ACTION ITEMS:

- Learn about the programs currently in use in neighboring states.
- Work with the Kansas Department of Agriculture and the Kansas Cooperative Council to develop formal language and introduce proposed bill into legislation.
- Work with USDA to establish an MOU regarding field locations to set up traps for monitoring.
- Provide education to producers about the program.

**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.**

#### ACTION ITEMS:

- Address water policy issues that may limit the growth of cotton in Kansas.
- Evaluate profitability, prices and water use of cotton.
- The Kansas Cotton Association will use strategic marketing tactics to promote the action items in the Kansas Water Vision related to cotton at water conferences throughout the state.

**Predominant use of specific herbicide tolerant cotton varieties by Kansas growers. Misunderstandings currently exist related to the distinction between 2,4-D tolerance and dicamba tolerance.**

#### ACTION ITEMS:

- Communicate information about cotton varieties through social media, field days and other educational opportunities.

**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.**

**ACTION ITEMS:**

- Communicate information about cotton varieties through social media, field days, and other educational opportunities.
- Expand education about varieties to include dicamba and EnlistDuo cotton and soybeans, so neighboring growers understand best management practices for herbicide application, as well as risks.
- Expand education initiatives targeted towards producers, retailers and the general public on the effects of 2,4-D and potential drift issues.

**Broad knowledge of the economic impact of growing irrigated cotton in Kansas, including expanded producer surveys, yield response curves and additional cost data.**

**ACTION ITEMS:**

- Survey Kansas farmers about irrigated crop production to compare economics of cotton versus other crops.
- Complete a detailed profitability analysis for cotton versus other crops by refining yield response data, evaluating variable costs, and analyzing past data and expected future variables.
- Publish results of the survey and profitability analysis demonstrating advantages and disadvantages of growing cotton in Kansas.
- Continue to collect more Kansas field data through KDA or Kansas State University on cotton production, inputs and economic return.
- Promote to Kansas dairies and feedyards the value-added components of cotton including seed (protein source) and the burr by-product (forage).
- Complete profitability analysis and water use for cotton versus other irrigated crops.

**Increase in Kansas farmers who include cotton in their crop rotation system as part of an overall water management strategy.**

**ACTION ITEMS:**

- Communicate results of cotton's water use and profitability more widely to encourage additional cotton acres in Kansas.
- Demonstrate through existing growers the potential water savings for growing cotton versus other irrigated crops.

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## **Medium Priority Outcomes**

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**Increased consumer desire for cotton over polyester and other non-cotton fibers.**

**ACTION ITEMS:**

- Through a website, videos and field days, develop opportunities to increase consumer awareness and education of the cotton industry in Kansas.
- Host informational meeting for new cotton growers to discuss marketing, herbicide best management practices, etc. Coordinate with Oklahoma State University and Cotton Incorporated.

### **Availability of direct enrollment in DriftWatch™ program for local gins or co-ops.**

#### **ACTION ITEMS:**

- Evaluate current enrollment process with KDA and identify necessary changes to allow direct enrollment of acres from gins or co-ops. KDA has internally reviewed process and criteria for enrollment and determined that a landowner signature is not required. Discuss outreach options to communicate this to cotton growers and encourage enrollment in DriftWatch.
- If changes are identified, plan for communication and outreach through co-ops, seed dealers, and cotton gins. Consider option to include the variety of seed (i.e., dicamba, 2,4-D, or other) for both cotton and soybeans in the DriftWatch™ enrollment.
- Enroll all Kansas cotton acres in DriftWatch™ program. Consider option to include the variety of seed (i.e., dicamba, 2,4-D, or other) for both cotton and soybeans in the DriftWatch™ enrollment.
- Enroll all Kansas cotton acres in DriftWatch™ program.

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## **Low Priority Outcomes**

### **Collaborative research working group to develop a strategic plan that addresses cotton research pitfalls.**

#### **ACTION ITEMS:**

- Site a K-State Research and Extension specialist with cotton expertise in southwest Kansas to connect research to in-field management strategies.
- Provide education to new producers and new crop consultants that focuses on agronomy, pest management and harvest preparations.
- Identify individuals, disciplines and organizations that should be included in a collaborative research working group.
- Hold initial (and then annual) meeting of the collaborative research working group to review potential research needs and priorities such as fertility and weed control, improving cotton as a feed product, and profitability.
- Develop a strategic plan via a collaborative research working group, outlining the research needs and priorities.
- Routinely review progress towards implementing strategic research plan.
- Evaluate options to contract for additional research, through both the university and non-university researchers.

### **Participation of cotton growers in Kansas agricultural trade missions to provide opportunities for increased cotton markets, in coordination with the Cotton Council International.**

#### **ACTION ITEMS:**

- Host discussion/scoping to identify priority trade countries.
- Develop schedule of potential trade missions to priority cotton trade countries; review annually.

Policies in this document are a reflection of industry discussion and not a representation of state government.