



DAIRY

EXECUTIVE SUMMARY

Kansas is one of the fastest growing dairy regions in the U.S. in terms of milk production, due to a variety of factors that make the state a prime location for dairy operations. Land availability, a ready supply of feed and an ideal climate provide a good foundation for dairy growth, and the efforts being made toward proactive water policies enhance the viability of future dairy farm expansion. Recent additions to processing operations within the state have significantly increased the ability for dairy farmers to process their product within the state, rather than exporting milk for processing. Several facilities within Kansas have actively worked to develop innovative strategies to add value to their product and to maximize their water use in order to increase efficiency and long-term viability.

Despite the growth seen in recent years, several challenges remain which serve as barriers to future dairy expansion. Water rights continue to be in demand in many areas of the state, and obtaining land with sufficient water rights can be difficult. Attracting a qualified workforce is a continual concern, as well as managing the challenges of an immigrant workforce, and issues of wastewater disposal and transportation impact the dairy industry on a regular basis. Opportunities to grow as a result of exports are impeded by fluctuating prices and international policies that affect milk products.

To build on the factors that have led to success in the dairy industry and to overcome these barriers to future growth will require collaboration among the public and private stakeholders in the industry. Identifying new technologies and strategies to conserve water in regions of Kansas that would be conducive to new dairies would positively impact the dairy industry, and adjustments to transportation policy could have a similar impact. Increased focus on education and workforce issue specific to the dairy industry could also enhance possibilities for growth of the dairy sector in Kansas.

STATUS

Kansas is the 16th-ranked dairy state for milk production and is home to 143,000 dairy cows on 300 dairy farms. Approximately 80-85 percent of the milk produced in the state is produced in western Kansas on 29 large farms that originated since 1994. Milk processing capacity has grown in the state since 2012 with the addition of processing facilities in Rexford, Garden City and Hugoton. There are also milk plants of recognizable size in Hutchinson and Wichita. Currently, 75 percent of milk in Kansas is exported for processing; however, with the addition of a milk powder plant in Garden City to be completed in 2017, an estimated 75 percent of milk produced in Kansas will be processed within the state's borders.

The Kansas dairy industry is one of the fastest growing dairy states in terms of rate of milk production growth. Kansas has established itself as a prime location in the U.S. for dairies with its abundant land, feed supply, ideal climate, proactive water policies and positive business environment. Kansas has consistently ranked as one of the fastest growing dairy states. Milk production in Kansas has doubled since 1994 and is now a one billion dollar industry. According to estimates prepared by the Kansas Department of Agriculture and based on the Implan economic data model, the Kansas dairy industry had a direct output of almost \$742.8 million and a total economic contribution of approximately \$1.27 billion. The industry creates 1330.8 jobs directly, and with indirect and induced impacts the total number of jobs grows to 4204.2.

OPPORTUNITIES

Kansas is considered to be a major dairy expansion state and likely will continue to expand. The following factors outline our comparative advantage and the opportunities that exist to influence the dairy industry's growth in Kansas.

Factor	Implications for Growth and Development Opportunities
Feed Supply and Land Availability	<p>Kansas is the seventh-ranked corn producing state and produces over four million tons of corn silage annually. Distiller's grains are available from local ethanol plants. Kansas is also known for raising high-quality alfalfa hay, growing more than 650,000 acres. Kansas is home to many excellent custom forage growers with experience in producing top-notch forage for dairies and feedlots.</p> <p>Obtaining land for dairy farms is comparatively much cheaper than in other dairy states, reducing start-up costs for new operations. Despite a cheaper price, this land still produces high yields of feed and forages and has a good supply of water.</p>
Heifer Development	<p>The existing livestock industry and growing number of heifer raising operations provide local and regional replacement heifer options. Kansas also has a large number of empty feedyards for sale that can easily and profitably be converted to heifer development facilities for raising heifers for out-of-state dairies.</p>

Factor	Implications for Growth and Development Opportunities
<p>Kansas State Univ. Educational Resources</p>	<p>Kansas State University offers a dairy teaching program to both undergraduate and graduate students. Courses offered range from fundamental to advanced genetics, nutrition, management, reproduction, animal health and milk processing. These classes, along with student programs, develop the next generation of leaders needed to maintain the state's dairies on a long-term basis. Nationally recognized faculty research programs at K-State directly support the dairy industry in the state along with K-State Research and Extension outreach programs in nutrition and management, physiology and dairy foods.</p>
<p>Milk Processing Expansion</p>	<p>The number of milk processing and production support businesses in Kansas continues to grow. This has created new market outlets for milk producers locally, which reduces the expense of transporting milk over long distances. Kansas dairy processing facilities are increasingly becoming vertically integrated as farmers capture more of the value of the supply chain.</p>
<p>Policies and Guides</p>	<p>Counties are not allowed to impose additional health and environmental regulations in excess of those mandated by the Kansas Department of Health and Environment Livestock Waste Management Section. This provides clarity and consistency for livestock producers in their ability to successfully manage their operations.</p> <p>A Relocation and Expansion Guide assisting in site selection and regulatory guidance is available for dairy producers, which expedites the process of opening a new facility within the state.</p>
<p>Water</p>	<p>Kansas is recognized nationwide for its proactive practices of conserving water for future generations. 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.</p> <p>Dairies have access to available water rights which can be obtained easily as they are bought and sold as a personal property right. Many water rights have sufficient capacity to support large dairy farms. Resources are also available to farmers to determine where the best wells may be located and state water staff can assist in determining life expectancy of water in certain locations to ensure future farm viability.</p>

SUCCESS STORIES

Several recent activities in Kansas have placed the state on a path toward success in expanding, attracting and retaining dairies and their associated industries in the state. Examples of these success stories include the following:

- Addition of three milk processing facilities since 2011
- Consistent annual increase in milk production since 1994
- Recent tax structure enhancements, including:
 - Income tax exemption on pass-through business income
 - Reinstatement of producers' ability to offset capital gains from the sale of breeding livestock, including cull cows, with schedule C, E, and F ordinary income losses
 - Sales tax exemption on the construction, reconstruction and remodeling of livestock facilities for projects greater than \$50,000
- In 2012, a dairy in northwest Kansas constructed a new milk condensing facility to add value to their milk for a direct marketing partnership with an international company. The farm now condenses the milk from their four farms to approximately 30% of original volume and ships it to processing facilities in Texas in a cost-plus model. This improves economic viability of the farm through more stable milk prices. Additionally, it enhances environmental sustainability through the recapture of water in a dry climate and reducing the number of trucks on the road.
- Dairies continue to utilize water numerous times resulting in great water conservation and long-term industry viability.
 - In 2015, a dairy in southwest Kansas became the first dairy in the state to implement a Water Conservation Area (WCA) management plan — a voluntary tool used to reduce water use in exchange for flexible water right management — at one of their three locations. Following the adoption of the consent agreement for this WCA, the dairy plans to implement WCAs at their other facilities.
 - Development of additional milk processing in western Kansas includes removing water from the milk for other use in the immediate area versus export of water in milk.

CHALLENGES

While Kansas is poised for major dairy expansion, the following factors represent challenges serving as barriers to achieving the objective of the dairy growth plan.

Challenge	Details of Challenge
Corporate Farming	Kansas corporate farming regulations inhibit the ability of Kansas dairy owners to find partners in financing and operating new dairy operations. They also prevent out-of-state dairy owners from expanding into Kansas in many of the 105 Kansas counties.
International Trade	The U.S. dairy industry is becoming increasingly affected by international dairy markets. A current surplus of milk supply worldwide has greatly suppressed domestic milk prices. While the U.S. must become more competitive on the world market, risk management strategies are needed to help protect from major price swings. The U.S. must also counter protectionist milk policies, such as a potential U.S. milk protein concentrate ban from Canada, poor dairy-specific Trans-Pacific Partnership negotiations, or Russian bans on dairy and ag products.

Challenge	Details of Challenge
<p>Processing Facility Wastewater Disposal</p>	<p>A significant amount of wastewater is generated by dairy processing facilities, particularly those which condense or dry milk. Identifying suitable quantities of land for waste application and securing adequate storage when land application is not feasible is challenging and the cost of treatment for onsite reuse can be costly. However, if the challenges associated with storage and treatment can be addressed, the wastewater can represent an opportunity to address declines in the aquifer and drought conditions.</p>
<p>Threatened and Endangered Species</p>	<p>Threatened and endangered species reduce the pace or viability of new projects and expansions. An example of this includes the lesser prairie chicken, which until late 2015 was listed as a threatened species under the Endangered Species Act. While a court order vacated the listing of the chicken, future listings of this or other species may delay or stop construction of new and expanding dairy operations.</p>
<p>Transportation</p>	<p>Kansas maintains the minimum federal gross vehicle weight for trucks of 80,000 pounds. Excess milk supply beyond local processing capacity will have to be exported great distances less efficiently.</p>
<p>Water</p>	<p>Many areas of western Kansas are closed to new appropriations for water rights. Therefore, incoming or expanding operations needing water must purchase existing water rights. Obtaining tracts of land with sufficient water rights can prove challenging for large dairies because areas with excellent water rights do not experience land ownership turnover at high rates. When water rights are purchased from an irrigation or municipal use for animal agriculture, such as dairies, a consumptive use calculation is applied that reduces the available quantity of water available.</p>
<p>Workforce Development</p>	<p>Access to a sufficient workforce has been identified as a barrier to growth for many agricultural-related and rurally situated industries. Most immigrant visa programs for agriculture are for temporary workers which aren't effective in a dairy setting where cows must be cared for daily. (Some visas will allow for workers to feed cows, but will not allow for them to milk cows, which is the most common labor need on the farm.) Related workforce issues include the lack of available housing for all income levels and incredibly low unemployment rates. Attracting highly qualified dairy owners and upper management also proves challenging due to quality of life adjustments compared with California and the Colorado front range where access to amenities and entertainment is more readily available.</p>

NEXT STEPS IN STRATEGIC DEVELOPMENT

Enhancing what has made Kansas dairies successful and overcoming barriers to future growth of the industry will require a cooperative approach. The following strategies have been identified as next steps in developing a strategic growth plan for dairy in Kansas.

Focus Area	Solution
Education & Research	<p>Promote the expansion of the dairy teaching facilities at K-State and increase the number of dairy extension agents, especially in western Kansas.</p> <p>Help the university secure a new state-of-the-art dairy teaching and research facility to replace the current dilapidated and outdated facility.</p> <p>Prioritize research of sorghum varieties and other water-efficient forage crops to improve adoption of sorghum as a forage source for dairy cows.</p>
Industry Outreach	<p>Identify potential partners and establish a schedule for strategic growth plan meetings.</p> <p>Proactively reach out to key industry leaders and major processors in Kansas regarding the development of a strategic growth plan.</p>
Transportation	<p>Encourage policy change to allow fluid milk to be treated as a non-divisible load under federal transportation law, through coordination with Kansas congressional leaders, Governor Sam Brownback and state government agencies.</p> <p>Increase the gross truck weight for hauling agricultural commodities in Kansas.</p> <p>Ensure Garden City transload facility is completed correctly and in a timely manner to maximize transport from the processing facility.</p> <p>Expand access to shipping containers and the ability to access rail without trucking empty cross-state containers.</p>

NEXT STEPS IN STRATEGIC DEVELOPMENT (cont'd)

Focus Area	Solution
<p>Water</p>	<p>Continue the implementation of the action items identified in the Kansas Water Vision and encourage the adoption of locally developed conservation strategies aimed at extending the economic life of the Ogallala Aquifer such as Local Enhanced Management Areas and Water Conservation Areas.</p> <p>Create administrative or regulatory authority for a water right owner to add a beneficial use to an existing water right to allow dual uses. For example, a dairy operator may add stockwatering as a beneficial use to an existing irrigation water right without applying consumptive use on the full right. By adding the beneficial use, the water right will be permitted an authorized quantity assigned to that beneficial use which may be different than the authorized quantity on the original beneficial use.</p> <p>Develop a Flexible Management Plan (FMP) that allows water right holders to divert any quantity of water, from any point of diversion, to any of the listed places of use and types of use limited to the overall annual quantity of the FMP. Showcase, on a field scale, the latest technologies in stockwatering infrastructure, water management, automation, reuse and other conservation practices aimed at reducing stockwatering water use.</p> <p>Implement a pilot demonstration project to evaluate the feasibility of an on-site wastewater treatment system capable of treating lagoon water to potable animal drinking water conditions.</p>
<p>Workforce Development</p>	<p>KDA has developed a survey that is being widely distributed to receive input on specific workforce issues and challenges and is committed to identifying and implementing strategies to overcome the concerns.</p>

OPPORTUNITIES TO EXPAND PRESENCE

Initial list of potential opportunities:

- Explore paid membership in the U.S. Dairy Export Council.
- Explore membership in the International Dairy Foods Association.
- Have a presence at international dairy events, such as World Dairy Expo.
- Have a presence at international dairy foods events, such as Dairy Forum.
- Leverage Food Export Midwest membership for exportable dairy products.

OBJECTIVE

Based on feedback and information gathered from stakeholders and key partners at the Agricultural Growth Summit in August 2016, specific growth objectives for the Kansas dairy industry will be developed.

Kansas AG SUMMIT

GROW SMARTER. GROW STRONGER. GROW KANSAS.

KANSAS STRATEGIC AGRICULTURAL GROWTH DAIRY — NOTES

MEETING SUMMARY

From April to July 2016, Kansas Department of Agriculture executive and agricultural marketing team members met with dairy farmers, processors and research faculty. Dairy farmers identified for the one-on-one conversations represented both small and large operations and ranged in geography throughout the state. Many expressed that abundant land, feed supply, ideal climate, proactive water policies and positive business environment make Kansas a good place to grow the dairy industry. Common themes of challenges impacting the growth of dairy in the state included available long-term water supply, workforce availability and development, and the expansion of transportation and infrastructure.

Research

- Need for an updated dairy farm at K-State
- Emerging technology with ear tags as a means to track animal nutrition and health
- Need additional extension specialists focused in dairy, not generalized extension agents

Rules & Regulations

- Current corporate farming laws in Kansas are restrictive to dairy business recruitment and growth
- Right to farm laws and framework in Kansas is a benefit to the dairy industry

Transportation and Infrastructure

- Increasing hauling weight limits important for more efficient milk transport
- Rail access is deficient in Kansas
- Need more access to shipping containers and ability to access rail without trucking empty containers
- Need to ensure the Garden City transload facility is completed correctly
- Increasing plant capacity in western Kansas is a benefit but now will need to increase the number of cows and milk production to keep those processing plants running efficiently

Water and Natural Resources

- Access and long-term reliability of water supply is a primary concern
- Strong need for re-evaluation of consumptive use regulations and identification of more flexible water right management alternatives for dairy/stockwatering use
- Wastewater management is a challenge both at the dairy and processing plant locations
- Need for more expedient review of livestock waste management permits

Dairy



Workforce and Quality of Life

- Need for immigration reform to allow visas for longer-term employees; seasonal workforce visas are not a good fit for a dairy who needs year-round labor
- Access to sufficient number of laborers and skilled workforce is a challenge
- Dairy industry competes with oil and gas and other industries for the same workforce
- Need for training programs to develop leadership and management skills
- Quality of life and community vitality was consistently voiced as a challenge for recruitment and retention of good employees

Potential Action Items

-
-
-

Draft