Kentucky Production Agri-Tech (KPAT) Initiative

Introduction

The backbone of Kentucky's agriculture industry is the existence of family-owned production farms and supporting businesses located in every region of the state. Often small operations, these entities make up the majority of the ag industry in the Commonwealth, therefore representing a significant portion of the state's overall economic development structure.

As the modern world continues to become increasingly dependent on technology, very few industries can successfully compete and move forward without greater digital connectivity. This is especially true for agriculture, which relies upon technology for core business functions. Agri-tech has become the common denominator when describing the needs of farming operations and all the factors involved in getting a crop from the field to the consumer.

The Kentucky Production Agri-Tech (KPAT) Initiative has been developed to bring attention specifically to production agriculture's growing needs in this world of advanced technology. Kentucky Farm Bureau has spearheaded the KPAT efforts, which are driven by a collective commonality and represented by every commodity leader in Kentucky agriculture, all experts in their respective areas.

The mission of KPAT is to bring forth a recognition of farming and business needs as it relates to ag-based technology, to engage with other statewide initiatives similar in nature, to ensure Kentucky production agriculture remains included in these initiatives, as well as sustainable and relevant as new digital initiatives are implemented across the Commonwealth, and to foster an environment of collaboration that allows technologically-driven success in this industry to be achievable by all.

KPAT Top Priorities

Broadband: At the top of any list of priorities related to agri-tech is the need for adequate broadband service throughout all areas of the state. Those in the agriculture industry have advocated for increased efforts, including funding, to make this a reality for years. Now, as COVID-19 has suddenly increased the need for remote work and learning capabilities, the issue has taken on a higher priority across all sectors of the economy and education.

Some issues brought forth by KPAT relating to broadband service include: GPS and regulations that could hinder its reliability, data systems, high speed internet, on-farm marketing, reliable and affordable service, data management, and broadband infrastructure.

The production agriculture field needs broadband connectivity to operate at optimum levels. These farmers rely upon connectivity to operate modern equipment, use cellphones and computers, and keep up with daily changes in market prices, among many other core business functions.

KPAT is urging all stakeholders connected to this issue, including government leaders, to make the effort to understand just how necessary broadband is to any agri-tech initiative, and know that without this needed service, production agriculture will continue to struggle in day-to-day operations and with long-term success. Through the use of existing infrastructures and current laws and regulations supporting broadband services, reaching the last mile of connectivity can be realized. But it will take a collective effort by all stakeholders at all levels to come together with the common goal of delivering this service to all.

Education: As technology has changed and advanced, so has the educational needs that go with it. With new equipment and processes being developed daily, the educational component to go with these advances should stay in stride.

In doing so, there are sectors within the state's educational structure that can be very beneficial to the advancement of agri-tech. Some advantages Kentucky already has when it comes to these needs include a comprehensive group of secondary student organizations which extend classroom learning, extensive agricultural education programs that allow secondary students a head-start on many technology-based programs, and an array of colleges and universities, along with a statewide system of community and technical colleges, that give students—both traditional and non-traditional— multiple opportunities to learn new skills.

KPAT suggests that the educational piece of any agri-tech initiative include:

- A statewide program for training technicians focused on all aspects of technology in agriculture
- Hands-on mechanical training
- The availability of online training
- Recruiting top talent into the agriculture field
- Continued use of education through extension
- Agriculture-specific information technology classes
- Supporting education at all levels to promote technology-based programs to bring young people to the agriculture industry

Marketing: The Oxford Dictionary defines marketing as, "The action or business of promoting and selling products or services, including market research and advertising."

As simple as it may sound, the world of marketing has changed dramatically over the past few decades due to advancement in technology. No industry is a better example of how beneficial strong marketing can be than agriculture.

Kentucky's ag sector has diversified greatly over the past 20 years, and the way it is marketed should follow suit. Hard copy ads and brochures are no longer coveted marketing materials as we now live in the era of podcasts and social media. Farm families have been more than willing to meet the challenges of this "new" way of marketing and market development, but with it comes many challenges.

KPAT participants see many issues pertaining to marketing including:

- The traceability aspect in which consumers can clearly see and understand where their products are coming from and how they are produced
- Connecting to large scale marketing and manufacturing efforts
- Partnering with state economic development groups to promote Kentucky-grown products
- Maintaining sustainability for on-farm production, including international trading opportunities
- Cost effectiveness
- Diversification as it relates to consumer trends
- Infrastructure needs to meet local food demands
- Direct marketing to the consumer
- Product development and consumer research
- Building stronger data systems and collection abilities

All levels of agriculture depend on marketing abilities and knowledge as year-to-year production decisions are made and month-to-month budgeting efforts are met.
Any agri-tech initiative must acknowledge these marketing challenges and address them in a way that benefits production agriculture, as well the smaller-scale farm market sector.

Research: Long before advanced technology showed up on our doorsteps, the key to most successes in the business world, particularly in the agricultural sector, has been research. Without it, new advances in animal husbandry would not have been met, the super crop yields of today would have taken multiple growing seasons to be achieved, and the ability to sell around the world would have been a months-long process, as opposed to the minutes it takes to reach to the other side of the planet via internet selling.

The agriculture industry has relied heavily on research for many years especially as it relates to crop production and equipment, and with the technology that exists today, these advances can come much faster and are much broader than the research efforts made decades ago. In recognizing this growing need, KPAT issues related to research include:

- Advancements in production efficiency
- Developing new efficiencies and advancements in production
- A focus on value-added efficiencies and opportunities
- New robotics technology and environmental technology
- Processing capacities
- Livestock monitoring capabilities

There are technological advancements taking place already connected to many of these issues, including electronic ear tags for livestock, existing technical training in many areas of robotics, and university studies connected to plant genetics and production.

Recognizing what is already taking place today helps in moving toward the future through increased educational efforts, recruitment of top young talent, and the ability to connect to digital communications in every region of this state.

Existing Opportunities

To be involved in production agriculture in Kentucky is to be at the pinnacle of the agricultural world. With the investments that have been made at the county and state levels by the Kentucky Agricultural Development Board, this state has moved beyond a one-crop dominant ag economy to one of the most diversified agricultural states in the nation.

The foresight in using half of the state's share of Master Settlement Funds for reinvestment into the farming operations and businesses that serve them has been a windfall for farm families who have fought to keep the tradition of the family farm alive for a new generation.

Add to that the system of universities in Kentucky that have provided invaluable research efforts, and the commodity groups that exist to promote and support their respective sectors, Kentucky is poised to be a model for other states to emulate. Another advantage is the way agricultural organizations work together in Kentucky to achieve common goals. From commodity groups to state universities, to the Kentucky Department of Agriculture and the advocacy efforts of Kentucky Farm Bureau, the opportunity exists for Kentucky to be the leader in the agri-tech arena, especially with so many of the pieces to this picture already in place.

Summary

Agri-tech is not new, but it has been living in this state for a number of years. While it may have been referred to by different names in the past, the idea of agriculturally based advanced technology has been alive and well in the Commonwealth for quite some time.

Now, it is time to move this initiative forward for the betterment of the agriculture industry. But moving forward together, as a collective industry, with common goals, is a necessity in order to achieve optimum results.

Any agri-tech initiative will be more successful when all stakeholders are brought to the table. KPAT is poised to connect with any and all such initiatives to ensure future farming generations will be aided by technology on their road to success. We are all counting on it.