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| Project Number:  | 1820-172-0204 |
| Project Title:  | Digital Agriculture Educational Programming for U.S. Soybean Producers |
| Organization:  | The Ohio State University |
| Principal Investigator Name: | John Fulton |
| Project Status - What key activities were undertaken and what were the key accomplishments during the life of this project? Please use this field to clearly and concisely report on project progress. The information included should reflect quantifiable results (expand upon the KPIs) that can be used to evaluate and measure project success. Technical reports, no longer than 4 pages, may be included in this section.  |
| A variety of activities were completed over the duration of this project which focused on developing data literacy educational information targeted at soybean farmers. The outcome was to soybean farmers better understand the agricultural data landscape, and evolving agricultural technologies and data analytics. An initial kick-off meeting held in St. Louis, MO helped to establish and finalize deliverables for the team while outlining a timeline for conducting different activities and defining the strategic course forward. The kick-off meeting also allowed team members and representatives from Smith-Bucklin and Osborn & Barr planning materials and communication for getting information posted to the Tech Toolshed website. Weekly meetings were used by the team to discuss accomplishments, needs and work though development of educational material for each of the 6 data principles. Curriculum developed for the six principles were summarized by creating short videos with PI’s discussion key aspects for farmers to understand for the data principles. The videos were then used to host two, online eMeetings where information was shared with feedback collected through questions and discussion. This information was helpful in improving the developed materials and working towards a draft of the six whitepapers. These eMeetings were also shared with industry upon request and posted for online access. We directed interested companies and people to the video recordings of the eMeetings with positive feedback. A Data Literacy Symposium was also hosted in July 2018 in St. Louis and again used to discuss the developed educational material with feedback information used to revise and improve content developed for the individual 2-page white papers for each data pillar. During Q3, the team has also reached out to state soybean associations and industry experts asking them to review the recorded eMeetings and draft whitepaper material. The final drafts along with original images for figures were passed along to Osborne-Barr for creating final version for online delivery. Q4 was dedicated to working with Osborne-Barr (O-B) on the whitepapers for each of the 6 pillars. The team had a few outside experts review and provide feedback on the whitepapers along with helping O-B finalize for inclusion on the Tech Toolshed website. Several PI’s promoted this new educational material and the Tech Toolshed website during state and regional crop production meetings. The final project deliverable was organizing the created educational material for a Data Literacy Kit. This kit consisted of placing the data literacy content on a thumb drive. The final step was sending out the thumb drives to USB and the participating institutions to pass out and promote the Tech Toolshed material during 2019. All tasks were completed for this project with material provided to O-B for use in further development of communication material and the Tech Toolshed website. The participating institutions plan to use the develop information during 2019 Extension and educational programming. |
| Did this project meet the intended Key Performance Indicators (KPIs)? List each KPI and describe progress made (or not made) toward addressing it, including metrics where appropriate.  |
| 1. 20% of soybean farmers access the reported information about data literacy and develop an improved understanding to ask questions about data collection, management and use by December 2018. 30% of soybean farmers who access the information find the reported information valuable and are able to develop a digital strategy for their farm.
	1. Developed material was provided to O-B for integration into the Tech Toolshed website. This included 6 white papers covering information about each of the 6 data literacy principles. The PI’s from each institution have also distributed these white papers during ‘18/’19 winter meetings.
	2. The two eMeetings / webinars were used to disseminate information on each of the 6 data literacy principles. The recordings were again provided to O-B plus posted online for open access.
	3. Results will be presented at least one professional conference through presentations and associated papers during the 2019 summer.
	4. The project team plan to distribute the white papers and summarized results during the 2019 InfoAg conference.
2. 20% of soybean farmers request the data literacy kit by the 2019 growing season.
	1. A data literacy kit was developed and are just now being disseminated with intentions of distributing to soybean producers through a variety of 2019 meetings and conferences.
	2. The information shared during the eMeetings were well received based on feedback and request for the recordings.
	3. Results have been shared with consultants and farmers at 5 conferences during December 2018 and January 2019. Attendees asked questions about the data concerns and how digital tools can provide value to soybean producers. The result of these discussions has enabled attendees to be more informed on the type of digital tools available, data sharing within the agriculture industry and understanding how to evaluate opportunities and limitations to the data they are collecting on-farm.
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| Expected Outputs/Deliverables - List each deliverable identified in the project, indicate whether or not it was supplied and if not supplied, please provide an explanation as to why. |
| 1. Comprehensive curriculum and educational information for the 6 data principles were developed during this project.
	1. Curriculum that provided base knowledge about farm data collected and needed information for farmers to ask the right questions surrounding digital technologies they are evaluating or utilizing.
	2. Developed material was integrated into the Tech Toolshed website with the intent to provide material that helps famers evaluate hope versus reality for the adoption of digital technologies.
	3. 6 white papers were developed detailing each of the 6 date principles. These were posted to the Tech Toolshed website and have been distributed by the PI’s from each university through Extension programming.
2. A symposium was held mid-year to overview the developed literacy educational materials and using feedback to improve and finalize the 6 white papers.
3. A Data Literacy Kit was developed during Q4 within information provided on thumb drives and being distributed in 2019 by each institution and Smith Bucklin / United Soybean Board). The thumb drives contain an organized and navigable method to review materials, curriculum and information developed during this project.
4. Final reports summarizing accomplishments of this project.
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| Describe any unforeseen events or circumstances that may have affected project timeline, costs, or deliverables (if applicable.) |
| The team maintained the planned timeline for activities and deliverables. |
| What, if any, follow-up steps are required to capture benefits for all US soybean farmers?Describe in a few sentences how the results of this project will be or should be used. |
| Digital agriculture is quickly evolving within the US and internationally. New technologies are constantly being offered to support farmers and consultants. There are a few companies that continue to grow market share but with company consolidation within agriculture and the focus on digital agriculture strategies, US soybean farmers need to keep informed on the situation and where opportunities exist for their farm operation. For example, there has been advancement of artificial intelligence (AI) based technologies plus data sharing among companies. What role do these play in farm business today? |
| **List any relevant performance metrics not captured in KPI’s.** |
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