



Science Solutions to Labor Challenges

February 21, 2019

Ag and Food Industry Workforce

- PDA has spent the last four years trying to understand the workforce of the Ag and Food Industry
 - Ag production, food processing, wholesale distribution, retail food outlets, food service
 - Landscaping, hardwoods, horticulture, and public venues
 - \$135 billion in output; workforce in excess of 579,000

Levels of Workers

- Three levels
 - Knowledge generators – scientists, engineers, and managers
 - Technical – vet techs, ag equipment service techs, drone pilots, biodigester managers, dairy herdspeople
 - Production

Challenges

- Challenges at each level
 - Knowledge generators: keeping the pipeline full
 - Technical: finding the right way to do this training
 - Apprenticeship
 - Micro-Credentials/Badges
 - Production: preparing people to enter career pathways and advance (K-12, veterans, adults)

Engagement

- Engaging the traditional workforce and education systems has been a challenge
 - Workforce funding
 - 28 in-demand jobs
- We are more concerned about being industry-driven

Addressing Labor Needs

- Industry is addressing labor needs with science-driven solutions
 - Technology increases productivity and can reduce the size of the workforce
 - But, at the same time, technology requires higher trained people to use and maintain the technology
 - This is the workforce part of innovation process in the Ag and Food Industry

Innovation

- Innovation processes will require...
 - Knowledge transfer using technology (e-learning)
 - Theory demonstrated in practice (experiential learning)
 - Significant work-based learning with a focus on skill development (apprenticeship)
 - High levels of literacy
 - Development of soft skills including working in teams, critical thinking (troubleshooting) and creativity

Questions Remain

- Will our innovation systems be local, regional, or national?
- Collaborative or proprietary?
- Public or private?

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