Science Solutions to Labor Challenges

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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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