



Minnesota Dual-Training Pipeline  
Agriculture Industry Forum  
October 26, 2021

# Agenda

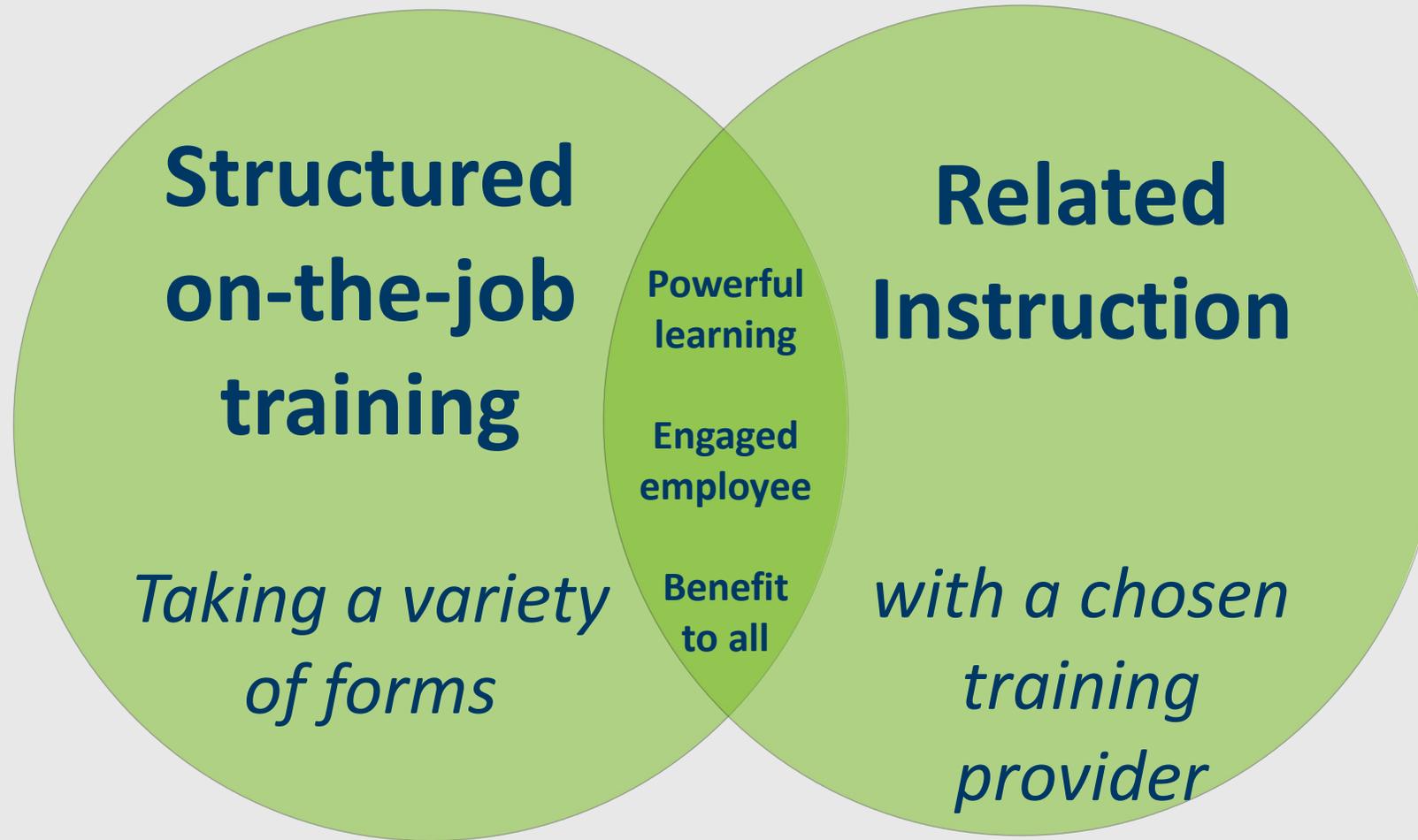
- Welcome and Introductions
- Minnesota Dual-Training Pipeline refresher
- Pipeline Updates
- Summer Technology Work
- Automation and Technology in Agriculture
- Labor Market Information
- Discussion on trends, strategies and successes in hiring
- Dual Training Grant update
- Next Steps and Wrap-Up

# What is Minnesota Dual-Training Pipeline?



- Source of support to employers to develop their own employment-based, dual-training programs
- An innovative approach to address current and future workforce needs in the key industries of **advanced manufacturing, agriculture, health care services and information technology**
- Private Investment, Public Education, Labor and Industry Experience

# Employment-Based Training



# Minnesota Dual-Training Pipeline Strategies

- **Industry Forums:** *Inform and direct* Minnesota Dual-Training Pipeline on industry trends and needs through discussion and strategic planning aimed to expand dual training.
- **Competency Councils:** *Define and identify* specific occupational competencies for the four key industries.
- **Dual-Training Consulting:** *Create and disseminate* dual training resources for employers, employees and dual trainees: toolbox, grants, and expanding mentorship networks to set up dual training.

# Agriculture Occupations

- Agriculture Equipment Mechanic
- Agronomist
- Agriculture Finance/ Lender
- Application Technician
- Crop Farm Manager
- Farm Animal Manager
- Grain Merchandiser
- Horticulture Farm Manager
- Quality Assurance/Food Safety Supervisor
- Swine Technician (grow finish)
- Swine Technician (sow farm)

# Diversity, Equity and Inclusion Work

- This spring and summer Pipeline offered diversity, equity and inclusion training for 37 participants from 27 different companies.
- DEI training participants participated in organizational assessments, cohort workshops, individualized team consultations and, based on this work – the companies created their own individual Diversity, Equity and Inclusion action plans.

# Upcoming Training Opportunity

- Pipeline will soon be offering a train the trainer opportunity for companies doing or hoping to start dual training.
- The Train the Trainer project will help individuals in charge of on-the-job-training to participate in cohort workshops, utilize trainer resources, have a coaching session with our consultant and create action plans for improving company training practices.
- Stay tuned for more details and how to sign up for train the trainer soon....

# Summer Technology Work Group

- Covid has further taught us that IT is important to all industries
- Convened a group of over 25 state-wide technology professionals including employers, educators, non-profits, membership organizations
- Met three times to discuss latest workforce trends in IT
- Determined in-demand competencies for current and future workforce needs
- Revamped and developed 13 IT competency models from this work

# New Information Technology Occupations

- Application Developer
- Business Intelligence Developer/Architect
- Cloud Architect
- Computer User Support Specialist
- Data Science/AI Machine Learning Specialist
- Database Administrator
- Information Security Analyst/Specialist
- IT Project Planner/Manager
- Network Engineer
- Software Engineer/Developer
- Testing and Quality Assurance Analyst
- Web Developer – Back End
- Web Developer – Front End

# Automation and Technology's Impact on Ag

- **Smart agriculture market worth \$20.8 billion by 2026**
  - Expected growth in precision farming, precision livestock and precision aquaculture
  - China is expected to account for the largest share of the agriculture market
- **Labor shortage pushes winemakers to automation**
  - “The machines can be expensive — about \$100,000 or more — but growers can recoup the cost over several seasons”
  - Pandemic travel restrictions have made it hard to find typical labor pools
- **AgriLife Research scientist pushing the bounds of future farming**
  - Profiles Dr. Azlan Zahid of Texas A & M who is working to create totally climate controlled and automated growing processes in warehouses.
- **John Deere acquires Bear Flag robotics to accelerate autonomous technology on the farm**
  - John Deere purchased Bear Flag for \$250 million
  - Bear Flag technology enables existing large agriculture machines to be programmed to be fully autonomous

# Automation and Technology's Impact on Ag

## Guiding Questions

What does this mean for the agriculture workforce?

How will agriculture education programs change/ adapt as more technology comes into agriculture?

What new jobs will be created in agriculture as a result of increased automation?

What jobs might go away?

# Automation and Technology's Impact on Ag

## Notes from Automation and Technology Discussion

Attendees shared that technology changes will cause the agriculture workforce to value skills more of being nimble and able to problem solve.

Attendees shared how colleges will have to adapt instruction to include computer programming in areas of instruction that had not previously had this in higher education.

Attendees thought that the idea of having drivers of farm equipment go away completely will be slower in the Midwest but will see some drop off eventually as automated equipment gains traction.

# Labor Market Update

- Minnesota's unemployment rate is currently 3.7% in September, compared to the national rate of 4.8%.
- Labor force participation is 67.9% in Minnesota, compared to the national rate of 61.6%.
- According to the 2020 DEED Job Vacancy rate report, agricultural workers has a job vacancy rate of 9.8% compared to 4.5% for all occupations. That's more than twice the state's average rate for all jobs; highlighting how in demand agriculture workers are in Minnesota.
- In August 2021, Minnesota had 69,100 part time workers (less than 34 hours a week), who wanted to work full time.

# Alternative Definitions of Unemployment

- Current Population Survey, Bureau of Labor Statistics
- U-3: Share of 16+ who were not employed in past week and who looked for work sometime in past four weeks
- U-4: + discouraged workers
- U-5: + “marginally attached” workers
- U-6: + people who are employed part-time but want full-time work
- Long-term: People who have been unemployed for more than 27 weeks.

# Where are potential workers?

- In the news just last week - Minnesota's unemployment rate just dropped to 3.7 percent as wages rise;
- September of 2021 – unemployment rate was 4.2 percent BUT
- Including discouraged workers: 4.4 percent;
- Including marginally attached workers: 5.1 percent;
- Including part-time workers who want full-time work:

**7.2 percent**

# Alternative Unemployment Rates

Measure	Definition	September 2021	August 2021	September 2020
U-3	Share of 16+ who were not employed in past week and who looked for work sometime in past four weeks	4.2	4.4	5.5
U-4	+ discouraged workers	4.4	4.5	5.6
U-5	+ “marginally attached” workers	5.1	5.3	6.3
U-6	+ part-time workers who want full-time work	7.2	7.5	9.7
Number of Discouraged Workers	People who want a job but who aren’t actively searching because they think there are no jobs available that fit their qualifications. Have looked in the past year but stopped looking in the past month.	4,700	4,700	2,900
Number of Involuntary Part-Time Workers	People who work less than 35 hours/week but who want and cannot find a full-time job	63,000	69,100	108,700

# Where are potential workers?

And it is fair to say that Minnesota's labor force is **86,000 fewer workers** as compared to February of 2020 – before the pandemic.

# What are job seekers saying about job seeking?

- Conversations with workforce practitioners in March of 2021 revealed:
  - Fear of contracting COVID in jobs that require on-site presence;
  - Mismatch of hours or salary needed to provide for their family;
  - Lack of access to technology or be computer literate enough to create accounts, apply online or handle job interviews via Zoom;
  - Not hearing back from employers after having applied;
  - Anxiety about switching occupation or industry because they have not had to search for a job in years;
  - Uncertainty related to school schedules and availability of dependable day care;
  - Lack of adequate transportation (no car and no public transit).

*Credit: Minnesota Economic Trends, Alessia Leibert, June 2021*

# What might employers do to continue to adjust?

- Increase compensation for most undesirable work shifts;
- Make the job more attractive without necessarily increasing the wage:
  - Boosting benefits packages such as parental leave, more flexible and part-time work schedules, introducing more flexibility in attendance policies and reducing mandatory overtime;
- Increasing training for new hires and encouraging incumbent workers to pursue additional training by tying compensation and internal advancement to completion of training;
- Offering college tuition reimbursement to their existing employees or new hires;
- Partnering with local colleges on curriculum design and offering internships to students in vocational programs.

*Credit: Minnesota Economic Trends, Alessia Leibert, June 2021*

# Discussion on latest trends, strategies and successes in hiring

## Guiding Questions:

- What's the biggest struggle: quality or quantity of applicants?

\*Notes from Forum\*

Attendees said both are a factor, but quantity might be a slighter higher factor now.

# Discussion on latest trends, strategies and successes in hiring

## Guiding Questions:

- What new hiring strategies are working?

\*Notes from Forum\*

Attendees shared about how they have boosted employee referral programs. Also discussed trying to do more to recruit international workers.

# Discussion on latest trends, strategies and successes in hiring

## Guiding Questions:

- What key changes have you made in hiring due to pandemic?

\*Notes from Forum\*

Remote interviewing was cited as well as some remote onboarding.

# Discussion on latest trends, strategies and successes in hiring

## Guiding Questions:

- What are the most difficult jobs to fill/ most in-demand needs for you?

\*Notes from Forum\*

Ag Mechanics, ag drivers with a CDL, farm appraisers and butchers/meat processors were discussed as hard to find. Also discussed how the general population demographics are posing challenges.

# Dual Training Grant Overview

- Up to \$150,000/year per grantee
  - Up to \$6,000/year per dual trainee
- Pays for related instruction tuition, fees, required books/materials
- Reimbursement model for payment
- 25% match required for employers with annual revenue exceeding \$25 million

# Dual Training Grant Update

- MN Office of Higher Education Update/Legislative Update
- Next Grant Round opens March 2022 and closes April 2022
- Grant Writing Webinars
- Approximately \$2 million in Dual Training Grant funds are available
- Contact Jacquelynn Mol Sletten at [Jacquelynn.mol.Sletten@state.mn.us](mailto:Jacquelynn.mol.Sletten@state.mn.us) with any questions

# Upcoming Minnesota Dual-Training Pipeline Events

- **Minnesota Dual-Training Pipeline 101 Introductory Webinar**

Tuesday, December 7th from 9 to 10 a.m.

- **Pipeline Speaker Series**

TBD – always looking for recommendations of speakers and topics of interest

- **Next Pipeline Agriculture Industry Forum**

February 8, 2022

# Thank You!



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