

# Preparing the Workforce of the Future



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# Preparing the Workforce of the Future: Insights from a National Training Needs Assessment

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**FRESNO STATE**  
Jordan College of Agricultural  
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 **CALIFORNIA CREAMERY  
OPERATORS ASSOCIATION**

# Study Overview



**Education + Training = Critical for a skilled, future-ready workforce**



**Are current programs **meeting industry needs?****



**Goal = Identify gaps + Guide future programs**



- 1. Survey on educational and training needs**
- 2. Current programs evaluation**

# Survey Content

## Educational Topics in Dairy Processing

1. Primary Production of Milk
2. The Chemistry of Milk
3. Rheology
4. Microbiology
5. Collection and Reception of Milk
6. Building Blocks of Dairy Processing
7. Designing a Process Line
8. Pasteurized Milk Products
9. Long-life Milk
10. Cultures and Starter Manufacture
11. Fermented Milk Products
12. Butter and Dairy Spreads
13. Anhydrous Milk Fat (AMF) and Butteroil
14. Cheese
15. Whey Processing
16. Condensed Milk
17. Milk and Whey Powder
18. Recombined Milk Products
19. Ice Cream
20. Casein
21. Cleaning of Dairy Equipment
22. Dairy Effluent



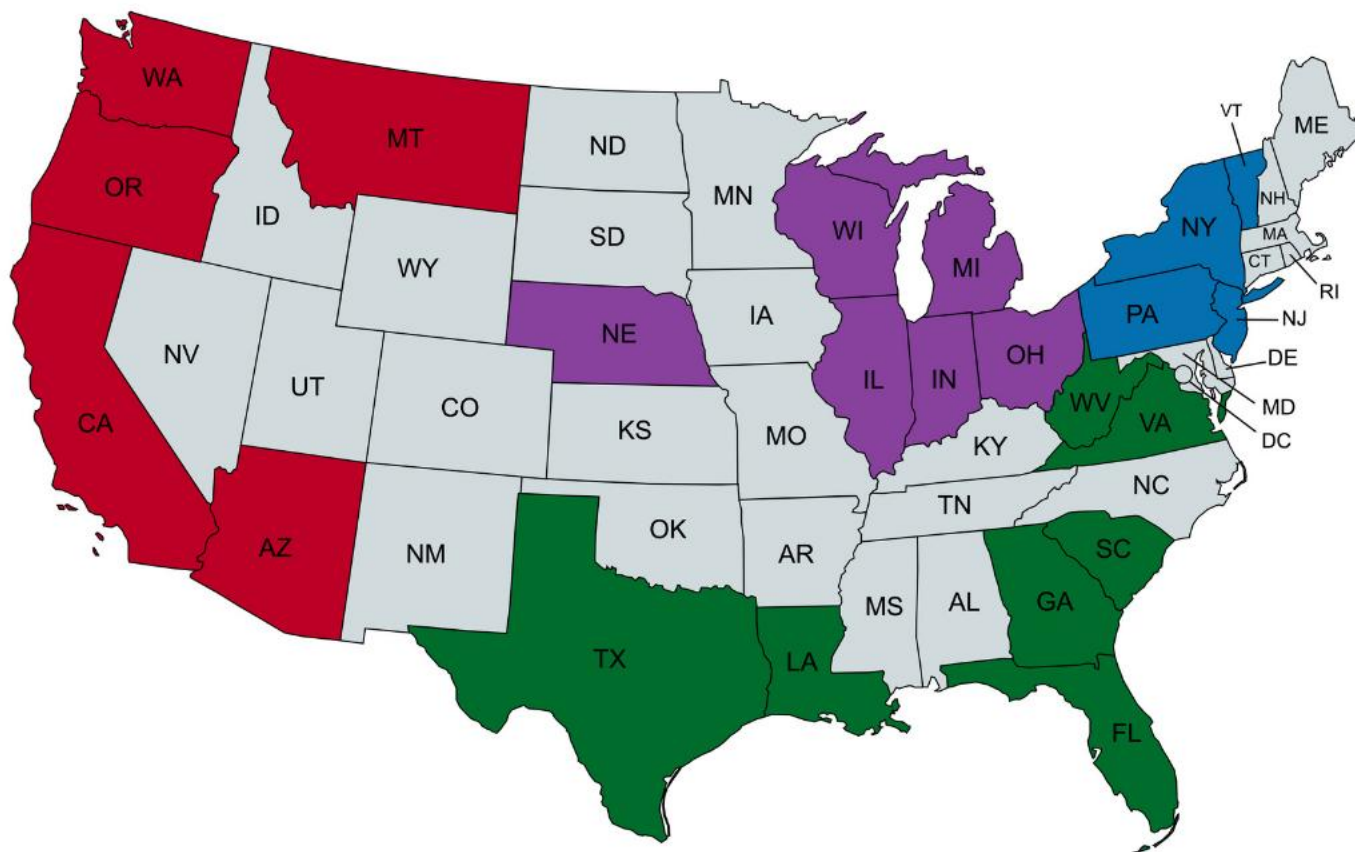
# Existing Educational & Training Programs

- Compiled 126 programs in dairy processing (Jan 2023 - Dec 2025)
- Related to the 6 National Dairy Foods Research Centers and other organizations



(U.S. Dairy, 2020)

# Survey Respondents



## 87 responses from 22 states

■ **West (40.3%)**

■ **Southeast (23.8%)**

■ **Northeast (19.4%)**

Midwest (16.4%)

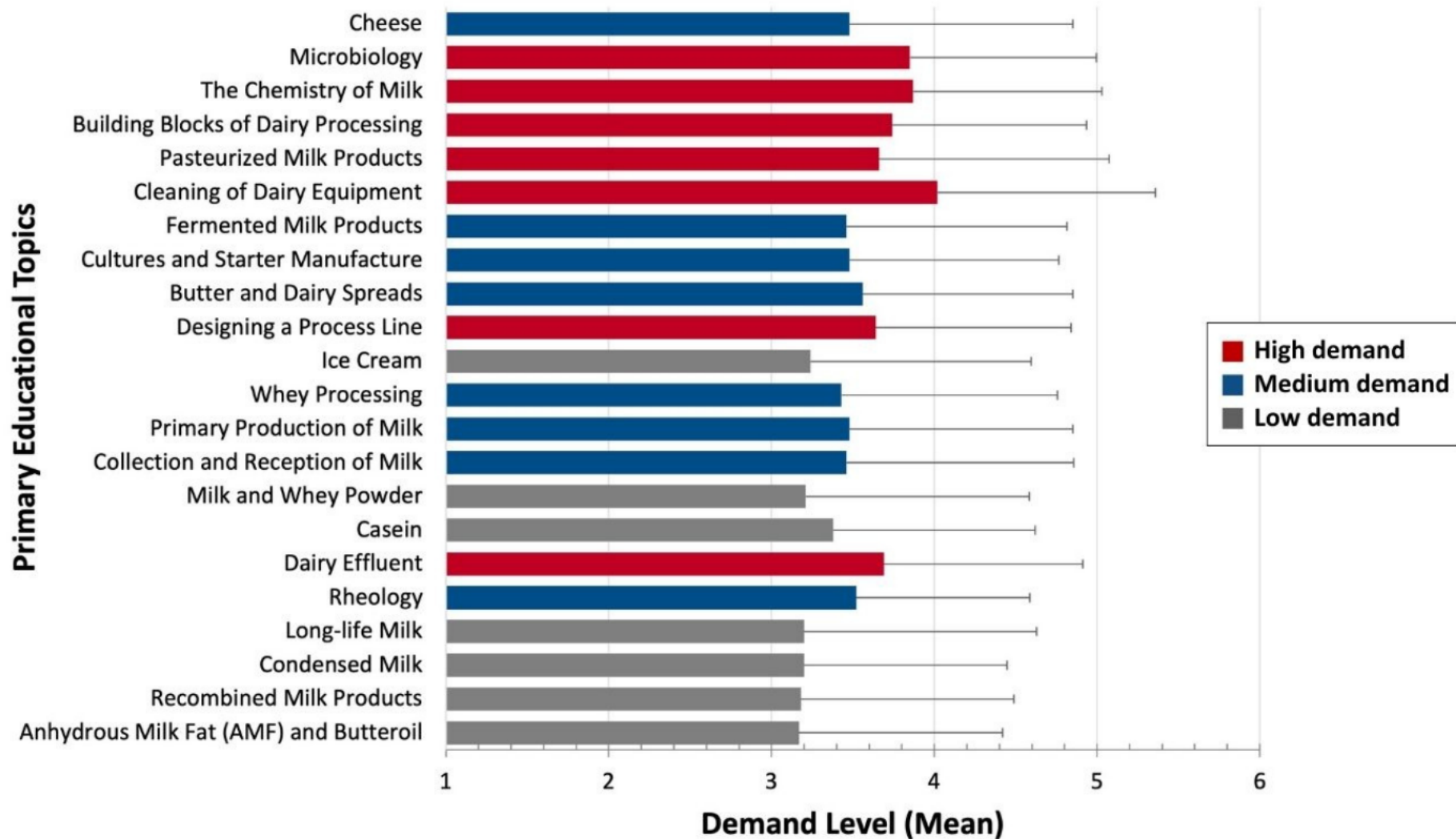
**Small-to-mid processors  
(1-500 employees) (75%)**

### Top roles:

### Food Safety (10%)

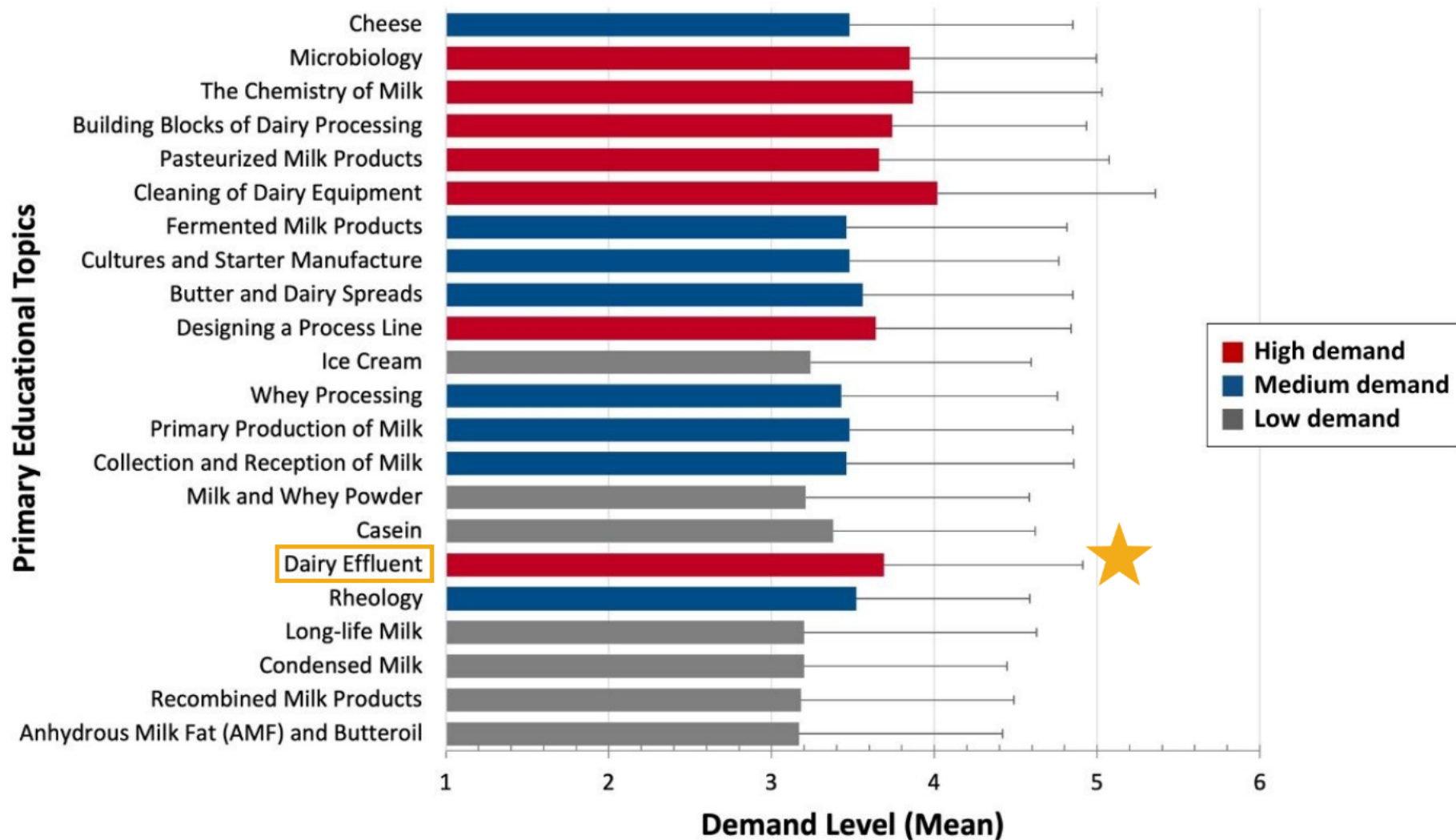
### Quality Assurance (10%)

# Demand Levels of Dairy Processing Educational Topics



Topics are categorized into demand groups (high, medium, low) and sorted based on current offerings availability (highest to lowest).

# Demand Levels of Dairy Processing Educational Topics



Dairy effluent ranked fifth in demand but had no dedicated educational offerings.



# Training Format Preferences

## Timing

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January – March (35%)

Tuesday – Thursday (59%)

## Delivery Method & Duration

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In-person (22%), Online Live (19%)

Half-day duration (48%)

## Willingness to Pay

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Maximum of \$150 for a workshop (50%)

# Key Takeaways

**01**

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**Stronger program alignment with evolving demand is needed**

**02**

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**Align future programs with top priority topics**

**03**

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**Invest in formats that meet today's workforce needs**

# Thank you!

We gratefully acknowledge the support of Carmen Licon and Erin Dormedy throughout this study. We also thank the California Creamery Operators Association, California Milk Advisory Board, and American Cheese Society for their assistance in survey distribution.



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# References

Bylund, G. (2015). Dairy Processing Handbook. Tetra Pak Processing Systems AB.  
<https://dairyprocessinghandbook.tetrapak.com/chapter/primary-production-milk>

U.S. Dairy. (2020, February 26). *Dairy Foods Research Centers*. Dairy Foods Research Centers.  
<https://www.usdairy.com/research-resources/dairy-foods-research-centers>





**CAL POLY**  
Dairy Products Technology Center



# Preparing the Workforce of the Future

Carmen Licon-Cano, Ph.D. Ph.D, ACS Certified Cheese Professional®  
Director of the Dairy Products Technology Center (DPTC)

June 2025



# CHALLENGES FOR THE DAIRY INDUSTRY



*Talent*



- Decline in number of students in Food Science or Agricultural Programs
- A Shift in career goals for recent graduates
- Higher education costs vs salaries
- Decline on qualified individuals to enter the workforce

# About Cal Poly San Luis Obispo





# The Dairy Products Technology Center (DPTC)



Since 1986



The DPTC mission is to *deliver educational programs, industry outreach, and technology transfer to add value to the dairy processing industry and develop leaders for tomorrow.*



CAL POLY

DAIRY PRODUCTS TECHNOLOGY CENTER



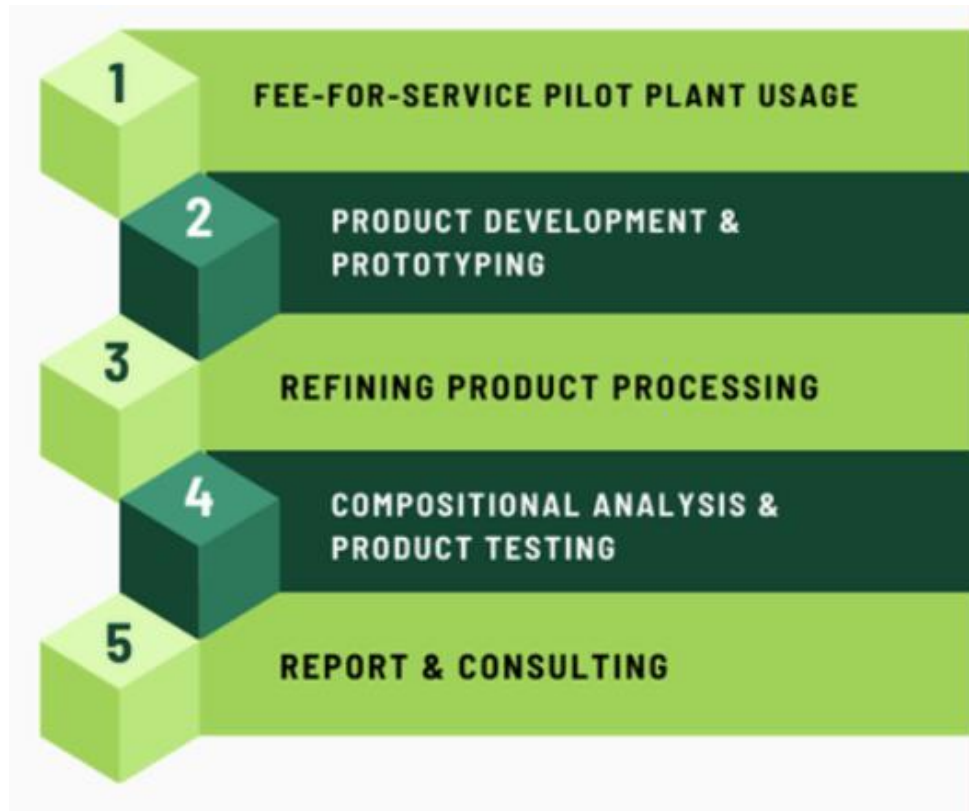
# Educational Short Courses

The Dairy Products Technology Center has been the educational dairy hub for California for the **last four decades for continuous educational opportunities.**

During the **last seven years**, the DPTC has offered **19 short courses**, including:



# What We Offer



# DAPHNE ZEPOS TEACHING AWARD SESSION:

## **CURD PROGRAM:**

Shaping the Future of Cheesemaking  
through Vocational Education

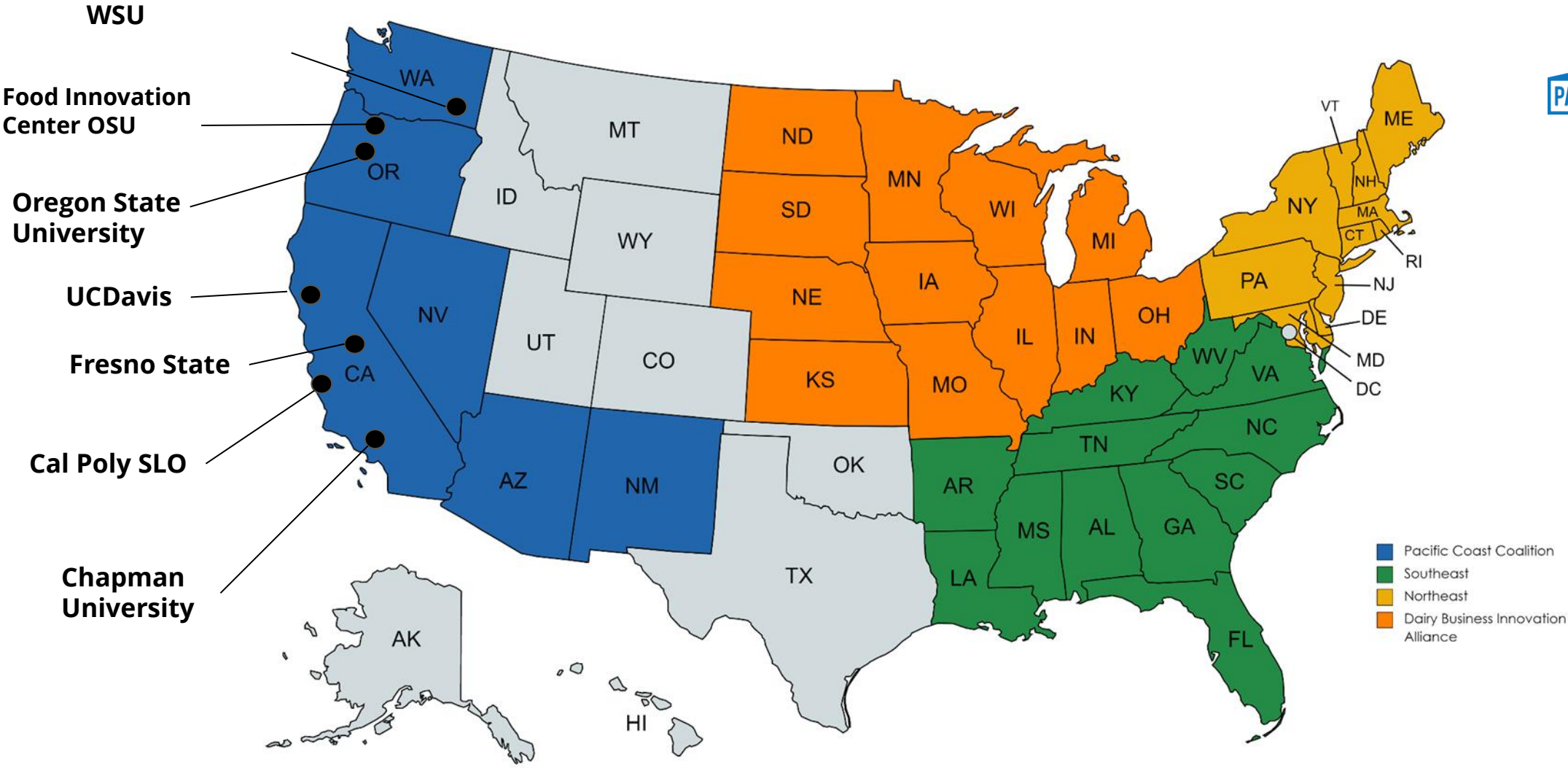
**SATURDAY, JULY 26**

Meeting Room 9-10 - SAFE  
Credit Union Convention Center





# Current situation: Pilot Plants and Creameries West Coast

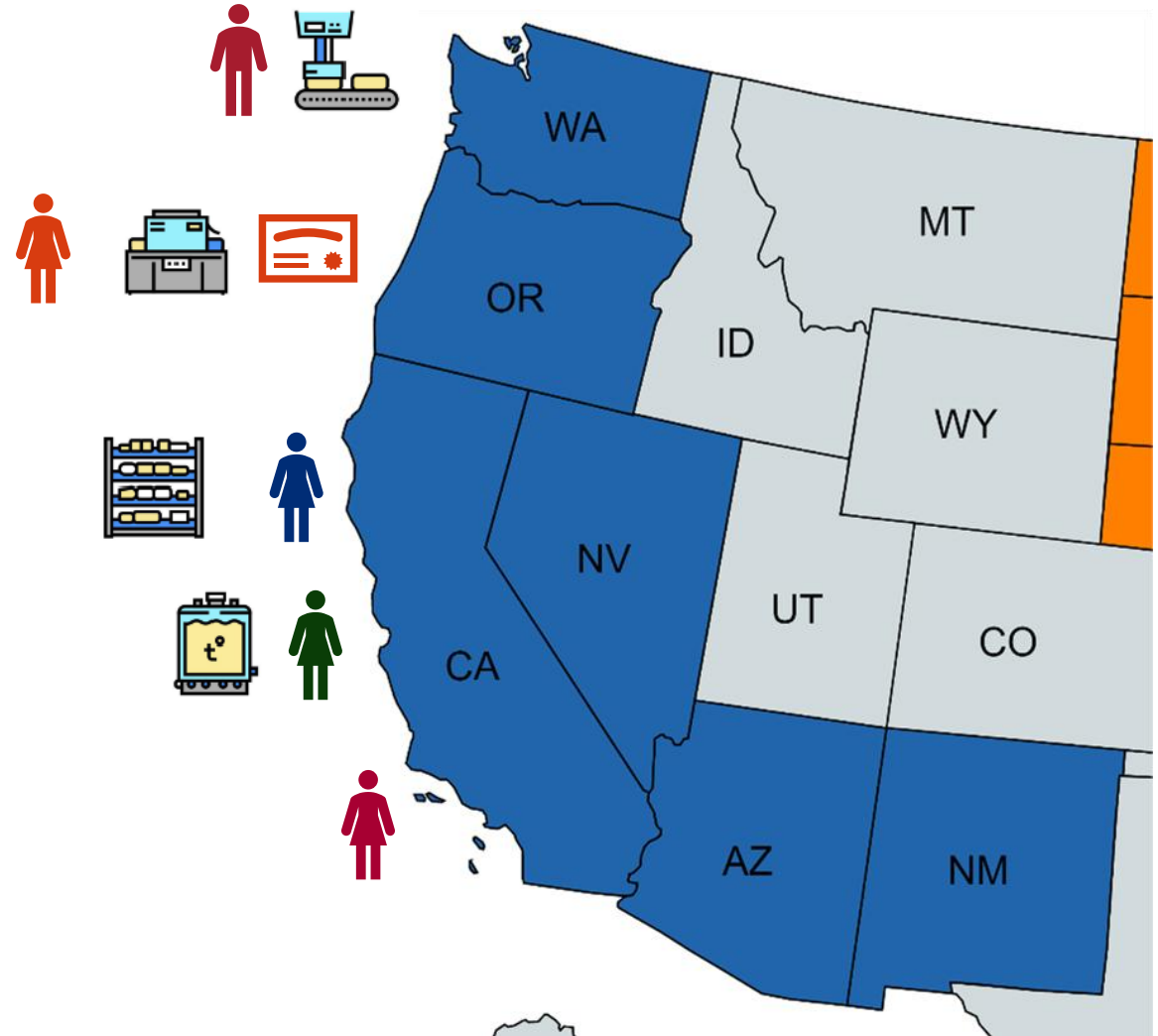




# How we utilize Pacific Coast Coalition-DBII funding to support workforce



FRESNO STATE



personnel

equipment

# Data Infographic

Dairy Processing situation in the West Coast

**6 DAIRY PROCESSING  
PROFESSORS**

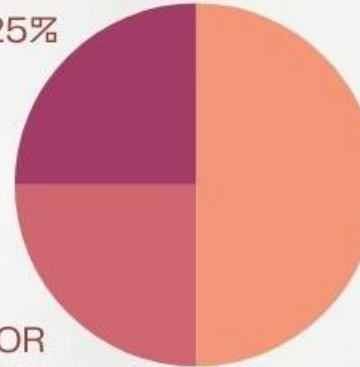


**5 TECHNICIANS**



**2 EXTENSION  
SPECIALISTS**

WA  
25%



CA  
50%

OR  
25%

**Pilot Plants**

**Research labs and  
commercial  
creameries**





## Dairy Products, Process & Packaging Innovation Conference

February 24, 2026 @ 8:00 am - February 26, 2026 @ 5:00 |

### SAVE THE DATE!

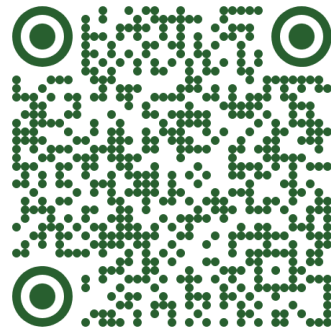
Our Innovation Conference is being held Feb. 24 – 26, 2026 in beautiful Shell Beach CA.

Information and registration information is coming.

# Let's Connect!

**Dr. Carmen Licon**

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## Presenting



LOOK FOR THE SEAL.  
RealCaliforniaMilk.com



GE VERNOVA

## Platinum



## Hospitality



## Gold



## Silver



## Bronze

