

Systemic Barriers to H5N1 Infection Control and Prevention on High-Risk Farm Settings

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Personal Protective Equipment for Influenza A (H5N1) in High-Risk Farm Settings: A Workshop
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Overview

- Demographics
- Regulatory and Policy Framework
- Considerations for Personal Protective Equipment



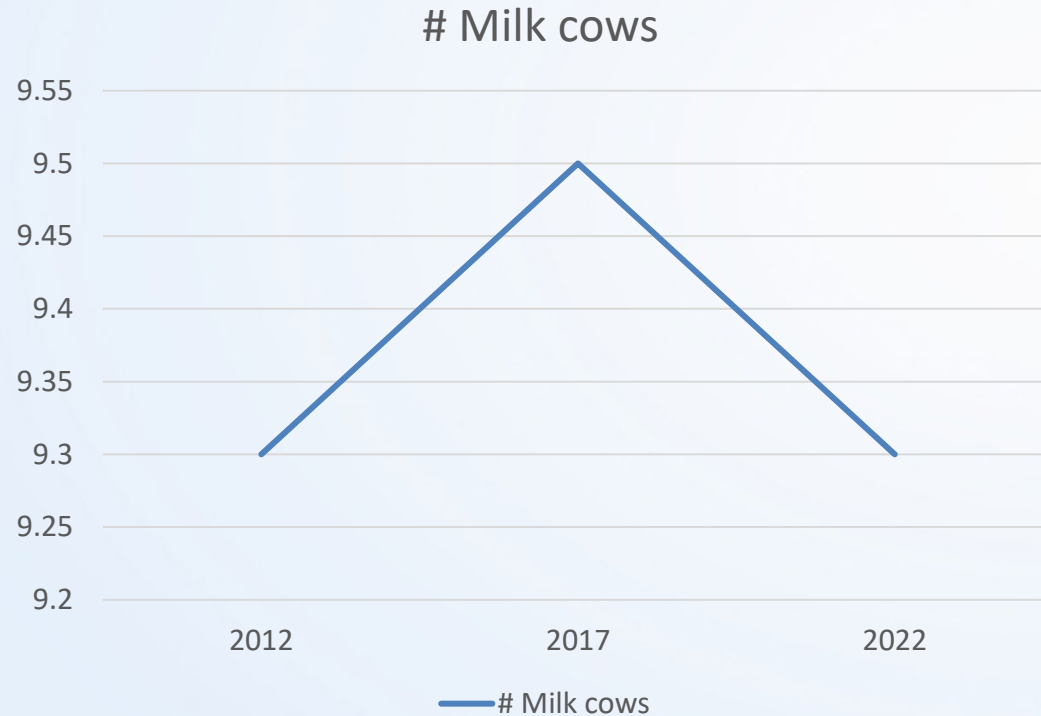


- Immigrant labor accounts for 51% of all dairy labor
- Dairies that employ immigrant labor produce 79% percent of the U.S. milk supply

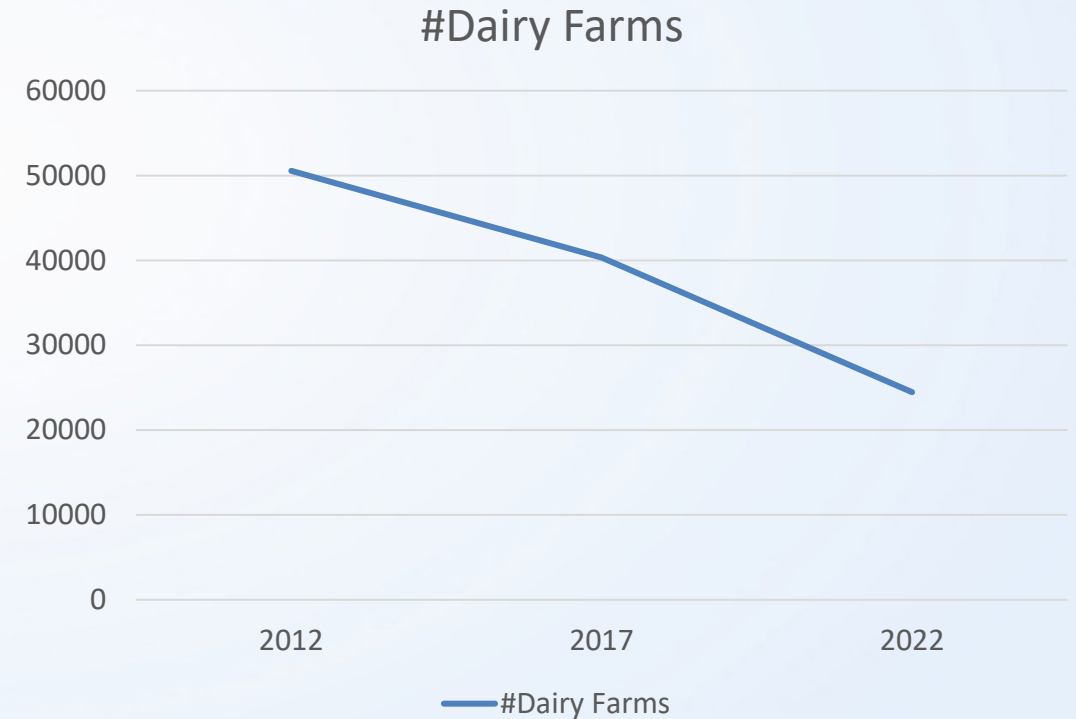
2015 National Milk Producers Federation Commissioned Report, CNAS
<http://www.nmpf.org/files/immigration-survey-090915.pdf>

Producing the Same Amount of Milk with Fewer Farms

**Number of Milk Cows in the U.S.
(2012 – 2022)**



**Number of Dairy Farms
(2012-2022)**



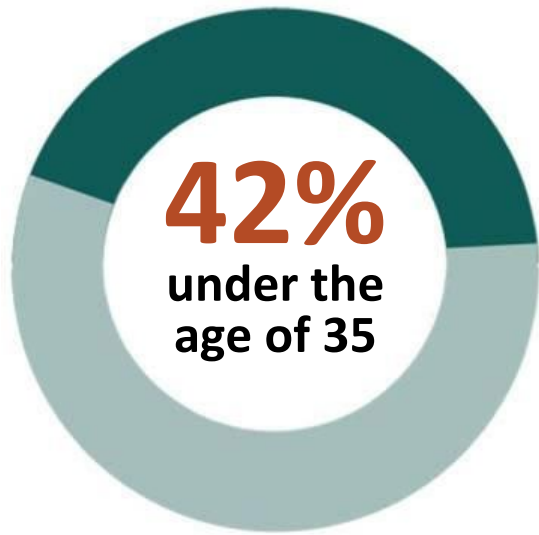
Percent of Milk Cow Inventory, by Size of Operation (no. of head), 2017 and 2022



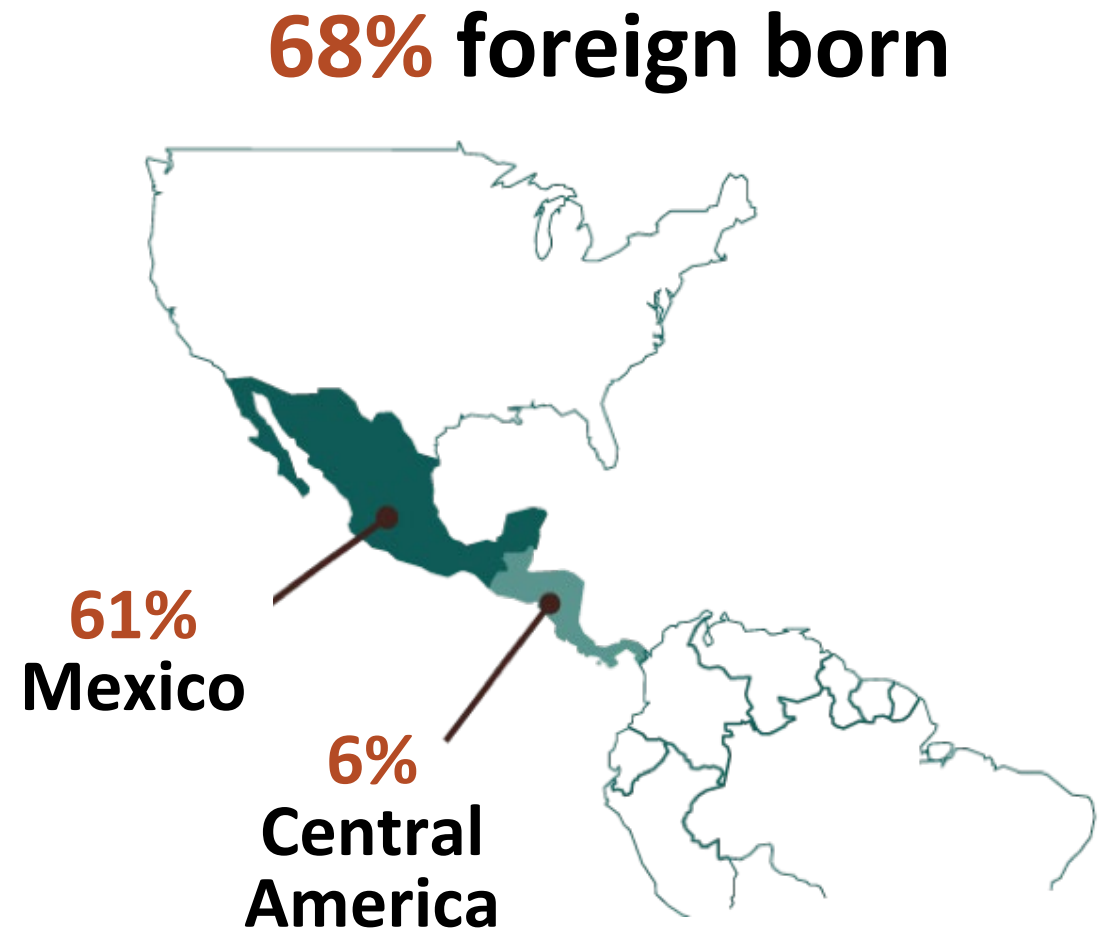


Labor Force Demographics

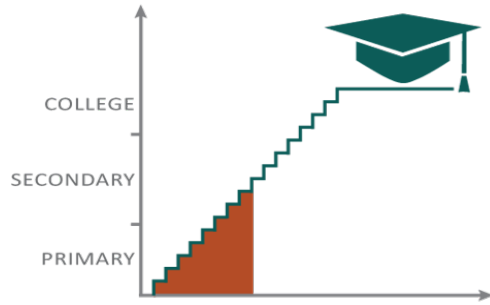
Agricultural Worker Demographics



Agricultural Worker Demographics ¹



Agricultural Worker Demographics ¹



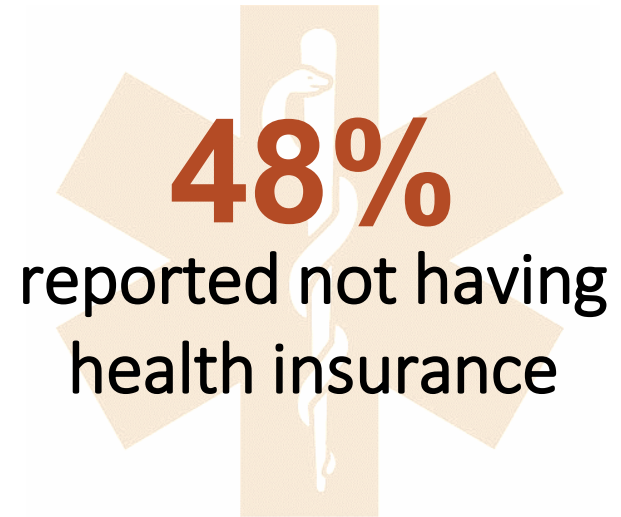
Workers, on average, have a
9th grade education



Mean and median individual
income range from **\$20,000**
to **\$24,999**



21% of agricultural worker families
had total family incomes below 100%
of the Federal Poverty Level



40% had not visited a U.S.
healthcare provider in
last 12 months

MN Project Demographics

19 farms enrolled (94% were milking >500 cows)

Average number of workers = 21 (range 10 – 43)

Median number of Hispanic workers = 15 (range 7 to 43)

44% of farms provided on-site housing

Worker Characteristics

Numbers %

Workers trained



360

Preferred language



Spanish (94%)

Country of origin



Mexico (74%)

Guatemala (12%)

Nicaragua (9%)

Other (5%)

Educational Level



None to Fifth Grade (14%)

Sixth to Eighth Grade (27%)

Ninth to Eleventh Grade (32%)

High School Degree (19%)

Some Postsecondary (5%)

Postsecondary Degree (4%)

Immigrant Dairy Workers in MN

Time living in the U.S.

- 25% said 1 year or less

Time working on a dairy

- 32% less than a year

Previous health and safety training

- Yes - 52%

Ever injured at work

- Yes - 42%

N = 360 participants in Promoting Worker project





Farmworker Exceptionalism

- National Labor Relations Act 1935
 - No federal protection for agricultural workers to bargain collectively
- Fair Labor Standards Act 1938
 - No minimum wage requirement for small farm employers
 - Overtime exemption for all agricultural employees
 - Child labor permitted

Farmworker Exceptionalism

- Workers' compensation
- Few OSHA standards
 - Water and sanitation, 1987
 - Only farms with 11 workers or housing
- EPA not OSHA - Pesticides



Broken Immigration System

- Few visa options
- High labor demand
- Lack of authorization or precarious immigration status = occupational hazard





Vulnerabilities

- Cultural and language differences
- Low-wage
- Immigration status
- Lack access to health care, insurance or financial resources
- Inherent health and safety risks of occupation
- Lack of training
- Lack of regulatory protection

Health & Safety Training of Dairy Workers





DATE	7/8	7/9	7/10	7/11	7/12	7/13	7/14
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	SAT
7001	200	200	100	90	700	1000	1800
5502	200	200	100	90	700	1200	1000
5253	400	200	200	700	700	600	2600
7004	400	200	200	700	700	800	3000
TOTAL 1-4	1200	800	600	3000	2900	3800	8400
3355	400	200	800	400	1200	400	1600
					1800	1900	2300
TOTAL 5-7		400	1400	1300	3000	2400	4200
TOTAL 1-7	1200	1200	1400	4300	5900	6000	12600
Pen 8							

Pen 1-4=45% Pen 5=46% Pen 6=45% PF=41%

* WEATHER Δ - Adjust Moistures ONLY

* INTAKES Δ

- 1) PEN COUNTS CORRECT
- 2) CHECK MOISTURES
- 3) USE GLOBAL IF PEN# AND MOISTURES ARE CORRECT-THEN CONTACT GARY/JIM

GLOBAL CHANGES 2-3 lbs WET TMR MAX / COW PER DAY

Final $\uparrow$ 1-3 lbs $\downarrow$ 1-3 lbs

1-3 lbs $\uparrow$ 1-3 lbs $\downarrow$ 1-3 lbs

* WEIGHBACK GOAL 3900 lbs

* < 5% ZERO DAYS

* CARETAKER

Partnership with Producers and Workers

Seguridad en las lecherías



Training Curriculum

- Introduction to Hazards
- Animal Handling
- Machinery and Equipment
- Workers' Rights and Responsibilities
- Chemical Safety and Confined Spaces

LECCIÓN LESSON 1

Como trabajar seguro en las lecherías *Working Safely in Dairy*

Seguridad en las lecherías

Curriculum preparado por:

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Scan to visit website:
<http://umash.umn.edu/projects/projects/seguridad.html>



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Translation of the facilitator's guide was completed by Shaun Judge Duval, with support from University of Wisconsin River Falls.

The complete curriculum is currently under OSHA review and pending approval.

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Impact of the Program (key findings)

- It enhanced the discussion on health and safety on the farm.
- It provided a forum for workers to talk about health and safety.
- It increased health and safety for workers.



Personal Protective Equipment (PPE)

The Centers for Disease Control and Prevention (CDC) recommendations for worker protection and use of personal protective equipment

Recommendations may be challenging to implement in many settings

CDC has asked state health departments to make PPE available to **workers** on dairy farms, poultry farms, milk processing and poultry and beef slaughter industries.



Wash hands with soap and water, then put on PPE in this order:

1. Fluid-resistant coveralls
2. Waterproof apron, if needed for job task
3. NIOSH Approved® Respirator (e.g., N95® filtering facepiece respirator or elastomeric half mask respirator)
4. Properly-fitted unvented *or* indirectly vented safety goggles or face shield
5. Head cover or hair cover
6. Gloves
7. Boots

Scan to learn how to put on and take off a respirator





Worker Health and Safety is Public Health