



UCDAVIS

VETERINARY MEDICINE

DAIRY TECH

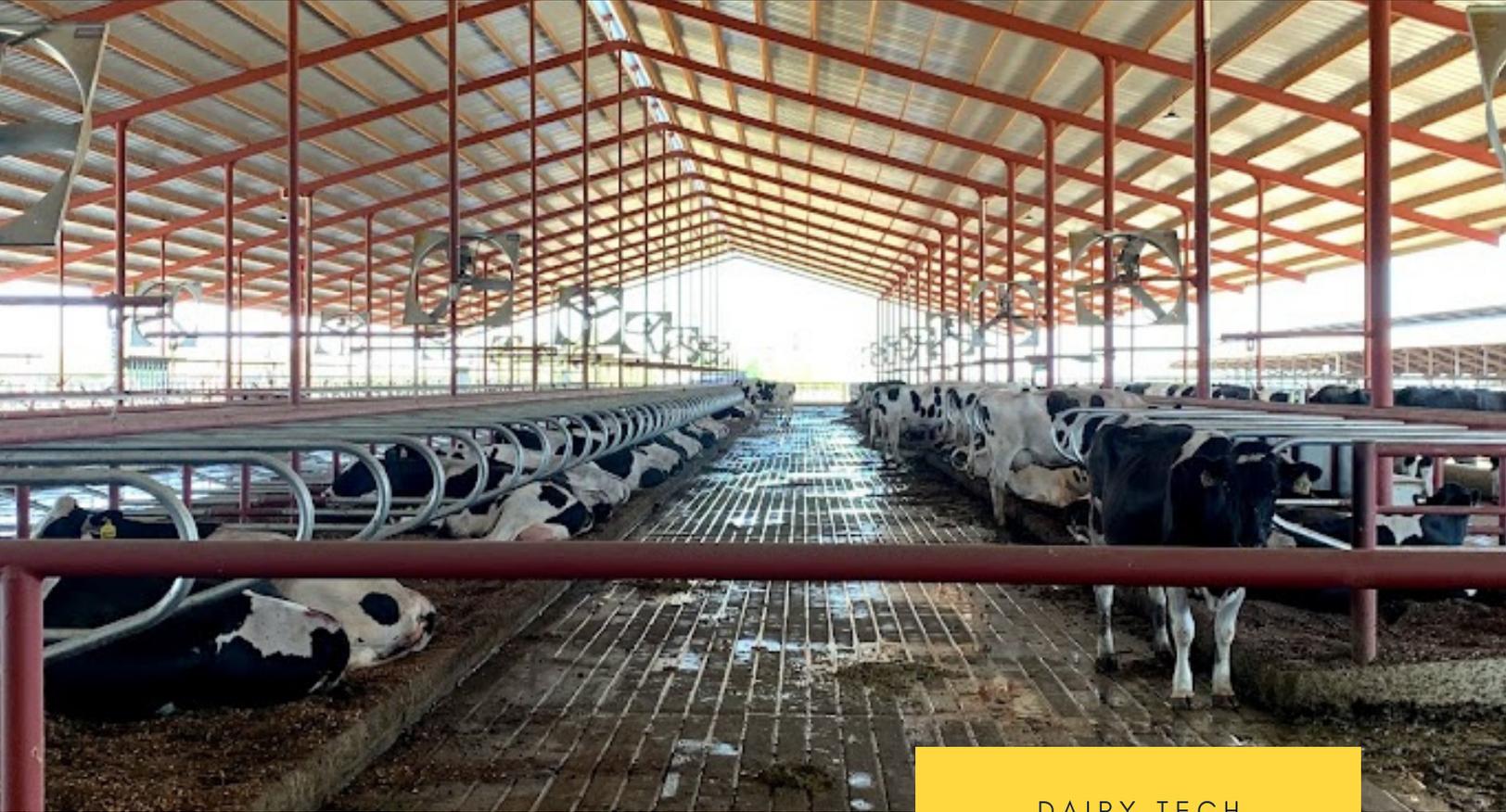
NEWS

ISSUE 05 • MAY 2022



ANIMAL SCIENCE

UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources



VISIONARY FARMERS: THINKING ON THE FUTURE

Greetings, dairy enthusiasts! In this edition, we are excited to share the stories and experiences of two California dairy farmers and their insights on AMS. Jones Dairy has been milking in AMS since 2014, and Fred Rau Dairy transitioned to the new system six months ago. We also want to introduce the two new team members of this project: Dr. Fabio Lima and Dr. Thaisa Marques. Welcome aboard!

We hope you like this edition!

DAIRY TECH
NEWSLETTER

TABLE OF CONTENTS

AMS project updates • P. 2

Jones Dairy • P. 2

Fred Rau Dairy • P. 3

Contact us • P. 4

UPDATE ON AMS PROJECT

BY DANIELA BRUNO

This newsletter is part of a collaboration between UC Davis School of Veterinary Medicine, UC Agriculture and Natural Resources, and the University of Minnesota. This project is funded by the California Dairy Research Foundation. Our objective is to better understand the decision-making process when transitioning to AMS, and the most important aspects related to management before, during, and after installing the AMS.



We just finished some analyses of the survey, and findings are highlighted below:

- The top 3 reasons for transitioning to AMS were: labor, herd performance, and animal welfare
- Over 56% of respondents kept their conventional parlor after installing milking; reasons are: not enough milking robots for all cows, and kept conventional parlor to milk hospitals and fresh cows.
- 6% of respondents would do something different during the installation process, including better training of employees before transitioning and modifications to barn design (i.e., adding more and bigger sorting pens, more water troughs, and more people-passing areas).

- 59% of the respondents stated that the **employees had no problems adapting to the new technology**. However, 34% had to hire employees with different skills.
- 77% of the respondents believe **AMS reduced labor** on their dairy, and 61% of the respondents reported a $\geq 10\%$ reduction in the number of full-time employees after the transition.
- Over 60% reported no change in the average bacterial count and somatic cell count (SCC), while 26% noticed a decrease in SCC; 33% of producers saw an increase in milk fat and protein, while **61% noticed an increase in milk production since transitioning to AMS**.
- 65% of farmers reported an improvement in cow comfort after transitioning to AMS, as cows spend more time lying/resting.

- **90% of respondents believe it's easier to detect diseases with AMS due to sensors.**
- 39% of respondents reported a reduction of clinical mastitis, and 62% believe that AMS implementation improved mastitis management.
- 41% noticed a decrease in lameness rates, and 57% believed it was due to an improved detection after implementing AMS.
- **45% noticed a decrease in the culling rate.** Before AMS, 56% of the surveyed dairies had a culling rate <35%. After transitioning to AMS, 85% of the surveyed herds had a CR<35%.
- 64% noticed an increase in the pregnancy rate without changing reproduction protocols.

Stay tuned as we will share more information on the next issues!

Jones Dairy is owned and operated by Mr. Jones in Stevinson, CA. Along with Postma Dairy, which was featured on the second Issue in February 2021, they were also pioneers in California. They first installed two AMS units in 2017, where they milked 400 cows. The decision to transition to AMS came when they started having problems with labor. The main pushers for AMS were herd performance, cows' welfare, and labor-related costs. Since the first installation, Jones Dairy has installed 12 more milking robots. He retrofitted an existing barn to accommodate 6 units and built a new barn for the 8 additional units. He also has two different flows, free flow on the retrofitted barn and guided flow on the new barn, which he prefers. Not all cows are milked by the robots. He kept his conventional flat barn to milk fresh and hospital cows and some of his lactating cows that were not a good fit for the AMS. He chose cows to be milked on the AMS based on udder conformation and cow behavior.

JONES DAIRY
PIONEERS IN CALIFORNIA
FROM 2 TO 14 UNITS



The farm crew is extremely adapted to the new technology. **One of his goals was to reduce the number of full-time employees and reduce labor costs, which he achieved after transitioning to AMS.** Mr. Jones also noticed an **increase in milk production and cow comfort, and feels that cows are calmer and lying down longer.** Overall, he is extremely satisfied with his decision to transition to milking robots and recommends this technology to prospective producers.

FRED RAU DAIRY

EYES ON THE FUTURE

Fred Rau Dairy located in Fresno, CA was established in 1942 by Fred and Wilma Rau. From 1953 to now, before installing their milking robots, their cows were milked in two flat barns and housed in open dry lots. Thinking about the future, having in mind sustainability, animal welfare, and all the labor challenges faced by Agriculture, they decided to transition to Automatic Milking Robots. Before transitioning, they visited several dairies across the U.S. and were stunned by excellent cow comfort and herd performance. They made a plan and moved forward with it, and in December 2021, they completed the construction of two new barns with free-stalls and the installation of 24 Lely A5 box robots. They decided to go with a L-shape design to help them sort the special needs cows into sorting pens. In addition to the robots, they have feed pushers and cow locator systems, which is very helpful when they need to track cows. They also have fans, high mists, and cow brushes to complement cow comfort.



According to Shonda Reid, Fred Rau's granddaughter and dairy manager, **they are extremely satisfied with the transition and feel confident it was the best decision for their family.** Despite the contentment, the transition came with challenges such as employee and cow adaptation and changes in overall management, which is expected in any transition.



FABIO LIMA, DVM, MS, PHD DACT

Dr. Fabio Lima is an Assistant Professor of Livestock Health and Theriogenology in the Department of Population Health and Reproduction at the University of California, Davis. He obtained his PhD and MS degrees, and residency training at University of Florida, and DVM at São Paulo State University, Brazil. He is a diplomate at the American College of Theriogenology. His research program is focused on developing strategies, tools, and knowledge to advance health, fertility, and production of dairy cows.

WHO WE ARE



WHO WE ARE



THAISA MARQUES, DVM, PHD

Dr. Thaisa Marques is a Postdoctoral Scholar in Dr. Lima Lab at UC Davis and Federal Institute Goiano, Brazil. She received her Ph.D. from Federal University of Goias, Brazil, M.Sc from Federal Institute Goiano, Brazil, and Veterinary Medicine degree from Federal University of Lavras, Brazil. She worked as cattle consultant for 17 years in Brazil. Her background is related to dairy production and reproduction, especially with precision dairy technologies.

CONTACT US!

Fernanda Ferreira
fcerreira@ucdavis.edu



Daniela Bruno
dfbruno@ucanr.edu



Marcia Endres
miendres@umn.edu



Camila Lage
cd546@cornell.edu



NEW MEMBERS

Fabio Lima
falima@ucdavis.edu



Thaisa Marques
tcmarques@ucdavis.edu

