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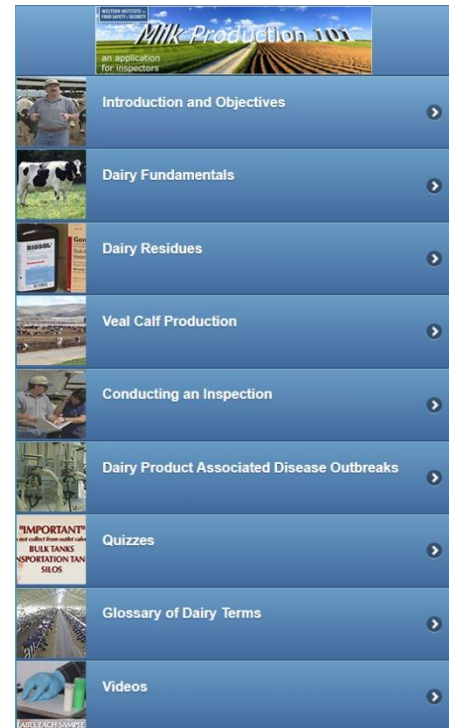
REQUIREMENTS
DESIGNED, DEVELOPED,
DELIVERED

- Mobile/Tablet friendly for field use via phones and other small form factor devices.
- Instructional text updateable by researchers after project hand-off
- Quizzes with response capture
- Quizzes and Glossary editable by researchers after project hand-off
- Modular: Intuitive interface for inspectors to select a module to learn and then take a quiz
- Video segments available within each module and via a collection of all videos

UCD WIFSS (Western Institute for Food Safety and Security): Milk Production 101: Inspector Training

Milk inspection is serious business for the consumer and the producer. FDA staff inspect the milk production and transportation process according to rules in place to assure food safety.

Inspectors are usually in the field hundreds of miles from a centralized training facility. The UC Davis WIFSS contracted with Cogni to develop in-the-field-useable, mobile-device-friendly training for use by inspectors. When they had time within a defined training window, the inspectors received training in modules wherever they were, with each module requiring a mastery quiz. Quiz results were received via WIFSS for analysis so as to support targeted instructional remediations.



Dairy Fundamentals

- + Cows
- + Milk
- **Manure**

Manure

Every dairy must consider that cows produce substantial manure, and therefore considerable investments are required to handle the waste associated with dairy farming. The manure handling system chosen by a producer will depend on state and local regulations as well as farm location, the number of animals, type of animal housing and bedding used, and the type and use of their farmland. The following table presents the composition of typical dairy manure (American Society of Agricultural Engineers, 2003).

Table 3. Fresh manure production per 1,000 pound live animal mass per day*

| | Mean | Standard Deviation |
|----------------------|-------|--------------------|
| Total manure, lbs | 86 | 17 |
| Urine, lbs | 26 | 4.3 |
| Volatile Solids, lbs | 10 | 0.79 |
| Total N | 0.45 | 0.096 |
| Total P | 0.094 | 0.024 |
| Total K | 0.29 | 0.094 |

Videos

- Dairy Residues Videos

- + Introduction
- + Penalties
- + Drugs & related laws
- + OTC, Rx, and extra-label use
- + Drug management program
- + Reasons for management Plan
- + Drugs with no extra-label use allowed
- + Routes of drug administration and absorption
- + Withdrawal time
- + Sensitivity of testing
- + Reasons residue is found: #1
- + Reasons residue is found: #2 and 3
- + Residue Monitoring



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Milk Production 101 additional design challenge: How to handle dynamic content

DYNAMIC CONTENT

Web pages designed for use by subject matter experts were provided to allow for just-in-time changes to:

- Instructional text
- Links to media and URL's
- Glossary
- Quiz content, including question, distractors, and correct answers.

MONITORING MASTERY

Results were sent to WIFSS for further analysis. Each incorrect answer, as shown in red in the graphic in the lower right, was recorded, so that misunderstandings on the part of the field inspectors could be addressed, either directly, or via modifications to the instruction.

Federal and State rules change. UCD WIFSS requested a design that allowed subject matter experts to change content for any section of the instruction.

A what-you-see-is-what-you-get (WYSIWYG) editor was provided. The expert selects the section of instruction to edit.

Additionally, video segments or audio narration could be updated by link changes and/or changes to media file at the server.

Testing content could also be updated.



[Introduction video](#)

Drugs

When dairy animals get sick and need treatment, producers and veterinarians may prescribe antibiotics and other drugs. These drugs must be used judiciously to prevent residues from milk or dairy beef sent to market. The marketing of milk or meat with antibiotic residues can result in financial and criminal penalties.

[Penalties video](#)

A large variety of drugs have been approved or can be extra labeled for lactating dairy c are three classes of animal drugs:

- Over-the-counter (OTC): These drugs can be sold by any person or establishme prescription of a veterinarian.

