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UNIVERSITY of FLORIDA

DAIRY CALF AND HEIFER MANAGEMENT, DEVELOPMENT AND HEALTH

FLORIDA INTERNATIONAL DAIRY ACADEMY

DEPARTMENT OF ANIMAL SCIENCES

Instructor

Dr. Fiona Maunsell
Clinical Assistant Professor
Department of Large Animal Clinical Sciences
University of Florida
maunsellf@ufl.edu

Course Description

Although heifers represent the future of the dairy and an important investment, their management is often given a back seat to other enterprises on the farm. Good nutrition, management, and health programs are essential to meet heifer-rearing goals. This course seeks to develop an understanding of important influences on dairy replacement heifer development and health from birth to calving, as well as the impact of those factors on future performance. Areas of focus will include growth and development; housing and facility design; management of the calf at birth; feeding management; vaccination and other preventive health management programs; important diseases of dairy replacement heifers in North America; monitoring heifer growth and health; using heifer data to make culling decisions; and, economics of heifer rearing. Lastly, a series of case studies will be presented to illustrate investigation and mitigation of heifer growth and disease challenges.

Course Objectives and Learning Outcomes

Provide students with the knowledge, critical thinking skills, and analytical skills that are essential for evaluation and monitoring of dairy heifer rearing programs. After completion of the course, students should be able to:

- Understand important influences on dairy replacement heifer development and health from birth to first calving
- Identify infectious diseases that impact calf health and productivity and identify their predisposing factors.
- Evaluate weaning transition programs.

- Develop strategies to prevent disease based on biosecurity, vaccination, and best management practices.
- Calculate the number of replacement heifers needed to be by a particular farm and understand the factors that influence this number
- Understand good antimicrobial stewardship with respect to calf rearing practices

Materials and Supply Fees

- None

Required Textbooks and Software

- There are no required textbooks. Course notes are developed by the instructor

Recommended Materials

- Course material will be supplemented with published articles for recommended reading where relevant.

Course Format and Expectations

Lectures and Readings: The course will be delivered via the Canvas course system. The major course topics will be separated into 6 separate modules according to the schedule below. Within each module there will be a series of recorded lectures that are approximately 15-20 minutes each. There will be a short assessment that you will be required to complete after completion of each lecture. There also will be recommended readings and exercises to complete some modules. You will be required to complete the module before moving to the next.

Course Schedule

Part 1:

- Module 1: Overview of Heifer Development (*in utero* to calving)
- Module 2: Dairy Calf and Heifer Facilities
    - Preweaning: Various housing types and feeding systems, their relative positive and negative aspects
    - Postweaning to calving
    - Relationships between housing systems and health disorders

Part 2:

- Module 3: Management of the dry cow and calf at birth
    - Relationship between management / nutrition of cows and health of calf
    - Colostrum management programs
    - Perinatal calf management
- Module 4: Calf feeding programs from birth to weaning
    - Liquid feed choices and management
    - Introduction of solid feed
    - Weaning management

Part 3:

- Module 5: Preventative Health Practices
    - Vaccination and other preventive health procedures
    - Vaccination programs
    - Parasite and fly control
    - Disbudding

Part 4:

- Module 6: Calf Diseases
    - Important diseases of dairy calves (North American focus)
        - Diseases by stages of life
        - Overview, epidemiology, risk factors and control of selected diseases (navel infections, calf diarrhea, abomasal bloat and ulcers, respiratory disease, coccidiosis, pinkeye, heifer mastitis)
- Module 7: Data Collection, Monitoring, and Economics
    - Data collection and records analysis
    - Using heifer data to make culling decisions
    - Economics of heifer rearing; overview and exploration of opportunities and challenges
- Module 8: Case studies
    - How to investigate and mitigate heifer growth and disease challenges

Class Expectations, and Make-Up Policy

Lectures can be viewed at students' convenience.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Certificate of Completion

A Certificate of Completion will be awarded upon successful completion of all modules and viewing of all required videos. This course is designed for self-paced learning, allowing students to progress through the material at their own speed. Students will have indefinite access to the course, enabling them to revisit the content at any time for continued learning and reference. We encourage students to engage with the material thoroughly to maximize their understanding of information provided.

Dairy AdvanCE Continuing Education

Students earning continuing education credit through Dairy AdvanCE will be awarded credit only after course has been 100% completed. Please allow time for processing.
Contact fida@ifas.ufl.edu for any questions or concerns.

This course will award 8 CEUs.