

SUNY

# MORRISVILLE

FALL 2001

## INTRODUCTION TO DAIRY SCIENCE

DANS 160

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**Office Hours:** As posted or by appointment

**Lecture:** Monday and Friday 9:00-9:50 AM (Wednesday)  
101 Marshall Hall  
**Laboratory:** Monday and Wednesday 3:00-5:00 PM  
Dairy Barn

### Course Description:

An introductory course to the Dairy Industry which will focus the scope of New York's, United State's and the World's industry past, present, and future. It will also include dairy economics, trends, dairy breeds, registered vs. grade cattle, selecting and pedigrees. This course will include nutrition, reproduction, herd health, animal behavior, housing as well as cow comfort. The various dairy products will be discussed as well as consumer trends, milk quality and processing. A section on farm organizations, cooperatives, farm management structure and the future of the industry will be included. The laboratory will supplement the lecture in a more practical nature and will include: animal behavior, marketing, performing milk quality test, field trips to manufacturing plants and farms, records with computer applications.

### Course Objectives:

Upon completion of the course, students will possess:

1. An understanding of the importance of the Dairy Industry to include the size, people involved the economical value and potential employment opportunities.
2. The knowledge of basic production techniques and strategies as well as the similarities and differences in management structure and philosophies.
3. The knowledge of milk: it's definitions, composition, nutritive value and the various quality standards, besides the basic skills in performing the quality test.
4. An understanding of the various milk related products, consumption trends and economic importance.
5. The ability to work around dairy animals with a basic understanding of dairy cattle behavior.
6. The ability to collect and organize information for dairy records and develop a basic ability in using dairy computer programs.
7. An understanding of farm organizations/cooperatives and their importance in the survival of the industry.

8. An understanding of the various careers associated with the dairy industry.
9. The knowledge of basic principles of nutrition, Reproduction, herd health, housing and cow comfort.

### Course Policies:

**Attendance** in lecture and laboratory is **mandatory**; students are not excused from class. Notify the instructor prior to lecture or laboratory if a conflict or event prevents class attendance. In the event of an emergency, contact the instructor as soon as possible after the non-attended lecture or laboratory. Students are expected to get class notes and pick up handouts.

**Grades** will be based on the course lecture and laboratory. Lecture grades will be based on two-hour examinations, a final examination plus a term project. Laboratory grades will be based on quizzed, lab reports and class participation.

The final grade will be based on point distribution of:

Hourly #1	20%
Hourly #2	20%
Final examination	20%
Term projects	20%
Lab quizzes/homework	20%
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Total	100%

### Required Text:

Selected reading in the Hoard's Dairyman, Dairy Herd Management magazine, Journal of Dairy Science, and Dairy L. Handouts and other provided material

### Lecture Schedule:

- 1 Course Introduction
- 2 Dairy Science - yesterday, today, and the future
- 3 Dairy Business/Economics
- 4 Dairy Business/Economics
- 5 Dairy Economics, Marketing and component pricing
- 6 The New York State Dairy Industry - New York State vs The World
- 7 Types of Dairy Farms and Trends
- 8 Type of Sales - Merchandising
- 9 Selecting Dairy Cattle - Pricing, Registered vs Grade
- 10 Breeds of Dairy Cattle
- 11 Animal Behavior
- 12 Animal Comfort
- 13 Housing System
- 14 Hourly Exam #1
- 15 Ventilation Systems
- 16 Feeding Systems
- 17 Herd Health
- 18 Calf Raising Systems
- 19 Milk Composition and factors that affect composition
- 20 Nutritional Value of Milk and Dairy Products
- 21 Consumer Trends and Milk Promotions (ADA)
- 22 Quality Control Assurance

- 23 Dairy Beef and Dairy by Products
- 24 Hourly Exam #2
- 25 Farm Organizations/Dairy Cooperatives
- 26 Dairy Careers
- 27 Herdsmanship and Management Skills/Structure
- 28 The future of the Dairy Industry

**Laboratory Schedule:**

August 27	Tour of College Farm and student management programs
September 3	restraining techniques
September 10	Evaluating pedigrees and dairy cattle
September 17	Autumn Review Dairy Sale Week
September 24	Animal behavior and restraints
October 1	Dairy beef market sale tour
October 8	Dairy computer applications
October 15	Registrations/identifications systems
October 22	Analyzing Cow Comfort
October 29	Milk inspection
November 5	Milk quality test
November 12	Dairy Farm Safety
November 19	Tour of milk manufacture plants
November 26	Dairy cattle housing/ventilation systems
December 3	Biosecurity management programs - heard health
December 10	Dairy farm tour