

## DAIRY FOODS

### I. Objectives

Purpose: One of the universal measurements of milk quality is examining its unique flavor characteristic. Through tasting milk, one can determine whether it has been collected under acceptable conditions, has been mishandled, or if it has been improperly stored. Flavor, texture and appearance of dairy products, likewise, can tell one about the quality of their composition and processing conditions. The purpose of this program is to train the individual to judge those product appearances, textures and flavors that reflect some production, processing, or handling condition which has influenced the quality of the finished dairy product. On the other hand, these same characteristics can prove quite helpful in the identification of various cheeses and the evaluation of their respective quality. Thus, the learning objectives for this program are:

1. To learn about the marketing aspects of dairy products;
2. Product identification (cheese);
3. Evaluating and identifying dairy product defects based on flavor, texture and appearance attributes.
4. The familiarizing of the student with processing, handling and storage practices that affect dairy product quality; and
5. To acquaint the student with organolytic techniques in evaluating food.

### II. Implementation and Program Schedule

- A. State Contest
- a. Registration due: **January 15**
  - b. Counties or schools can register more than one team.
  - c. Counties and schools can also enter junior teams. Juniors are those individuals that are in 8<sup>th</sup> grade or below.
  - d. A team consists of 4 members with the lowest member score dropped.
  - e. Plaques for top teams and top ten individuals ribbons will be awarded.

### III. State Contest Classes (Junior and Senior Contest)

- A. The contest classes are as follows:

<u>4-H DIVISION</u>		<u>FFA DIVISION</u>	
1. Milk samples	54 pts	1. Milk samples	54 pts
2. Cheese Identification	54 pts	2. Cheese Identification	54 pts
3. Problem Solving Class	54 pts	3. Problem Solving Class	54 pts
4. Ice Cream Samples	54 pts	4a. California Mastitis Test	32 pts
		4b. Milker Unit Heads	36 pts
5a. Questions on the Consumer Aspects of Dairy Products and Marketing	50 pts	5b. Questions on Milk Production and Marketing	50 pts

- a. Contestants will be allowed 2 1/2 hours for the contest.
- b. The score for each contestant is the total number of points for each class added together, after deductions have been made for incorrect answers. Therefore, the higher the score, the higher the rating. Ties for individual awards will be broken by (1) or by (2), if (1) does not break the ties.
  1. The individual having the highest total score, after the quiz score has been omitted, will be declared the winner.
  2. The individual having the highest combined score on milk samples, problem solving and cheese identification will be declared the winner.

## B. Class Description

1. **MILK SAMPLES** (Maximum - 54 pts)
  - Six milk samples will be scored on flavor (taste and odor)
  - Use score card 4-H 653 Milk Samples
  - References: 1) 4-H 945 4-H/FFA Dairy Foods Contest Coaches' Guide  
2) See Reference list later in the Dairy Foods Section and are all available from the Indiana 4-H Website: [www.four-h.purdue.edu](http://www.four-h.purdue.edu).
  - Scoring: -3 pts for each incorrect slight, definite or pronounced assessment  
-6 pts for each incorrect defect marked
  
2. **CHEESE IDENTIFICATION** (Maximum - 54 pts)
  - Nine cheese samples for identification will be selected from the following list:

Asiago	Harvarti
Blue	Monterey (Jack)
Brie/Camembert	Mozzarella/Pizza
Cheddar (mild)	Munster
Cheddar (sharp)	Parmesan
Colby	Processed American
Cream/Neufchatel	Provolone
Edam/Gouda	Romano
Feta	Swiss
  - Use score card 4-H-654 Identification of Cheeses
  - References: 1) 4-H 945 4-H/FFA Dairy Foods Contest Coaches' Guide  
2) See Reference list later in the Dairy Foods Section and are all available from the Indiana 4-H Website: [www.four-h.purdue.edu](http://www.four-h.purdue.edu).
  - Scoring: -6 pts for each incorrect identification
  
3. **PROBLEM SOLVING** (Maximum - 54 pts)
  - Use score sheet 4-H 714 Problem Solving
  - Reference: 1) 4-H 945 4-H/FFA Dairy Foods Contest Coaches' Guide  
2) See Reference list later in the Dairy Foods Section and are all available from the Indiana 4-H Website: [www.four-h.purdue.edu](http://www.four-h.purdue.edu).

### **Part I**

- Six samples for identification as a real or artificial dairy product will be selected from the following list:

#### **CREAMS**

coffee cream  
non-dairy creamer  
condensed milk  
filled milk

#### **CULTURED PRODUCTS**

yogurt  
sour cream  
no fat sour cream

#### **TOPPINGS**

whipped toppings  
whipped cream

## **DAIRY FROZEN DESSERTS**

no fat ice cream  
ice cream

## **CHEESES**

cheese  
cottage  
vegetable cheese

## **SPREAD**

butter  
cream  
margarine

## **SPECIALTY**

Chocolate  
Soy

### **Part II**

- Six questions will be asked related to any of the following topics:
  - Principles of merchandising dairy foods.
  - Factors impacting the demand for and commercial use of milk and dairy foods/products.
  - Nutritional value of dairy foods/products and their role in the diet.
  - Current issues relative to the marketing of milk and dairy foods/products and new developments in dairy foods processing.
- Scoring: -3 pts for each incorrect identification  
-3 pts for each incorrect classification  
-3 pts for each incorrect question answer

#### **4. ICE CREAM SAMPLES (Maximum - 54 pts)**

- Six ice cream samples will be scored on flavor, body and texture
- Use score card 4-H-656 Ice Cream
- Reference: 1) 4-H 945 4-H/FFA Dairy Foods Contest Coaches' Guide  
2) See Reference list later in the Dairy Foods Section and are all available from the Indiana 4-H Website: [www.four-h.purdue.edu](http://www.four-h.purdue.edu).
- Scoring: -1 pt for each incorrect slight, definite or pronounced flavor, body, and texture defect  
-3 pts for each intensity trait that is incorrect

#### **4a. California Mastitis Test (CMT) (Maximum - 32 pts)**

- Four CMT samples will be evaluated for abnormality using even numbers from 0 to 8 inclusive. See Scoring Guide for CMT on D100 CMT paper.
- Use score card 4-H-657 California Mastitis Test
- References: 1) D100 California Mastitis Test (CMT) see [www.four-h.purdue.edu](http://www.four-h.purdue.edu)  
2) Using CMT Test published by University of Missouri-Columbia Extension Division, Columbia, MO 65211. See [www.four-h.purdue.edu](http://www.four-h.purdue.edu)  
3) California Mastitis Test can be ordered from NASCO—Toll free 1-800-558-9595 or [www.enasco.com](http://www.enasco.com)
- Scoring: Each sample worth 8 pts each. It will be scored on absolute value of official score minus the student's score on each sample.

#### **4b. MILKER UNIT HEADS (Maximum - 36 points)**

- Six milker unit heads will be scored on defects present
- Use score card 4-H-658 MILKER UNITS
- The flexible parts are to be scored as rubber parts, the rigid plastic or glass parts



REFERENCE LIST:

Pub No.	Title of Publication on Indiana 4-H Website: <a href="http://www.four-h.purdue.edu">www.four-h.purdue.edu</a>	Overall	Coaches	Cheese ID	Ice Cream	Lessons	Milk Evaluation	Milker Parts & CMT	Problem Solving	Tests	Revised Date
4-H 653-W	CDE: Milk Flavor Dairy Foods Scorecard						X				2009
4-H 654-W	CDE: Cheese ID Dairy Food Scorecard			X							2009
4-H 656-W	CDE: Ice Cream Dairy Food Scorecard				X*						2009
4-H 657-W	CDE: CMT & Milker Unit Dairy Food Scorecard							X**			2009
4-H 714-W	CDE: Problem Solving Dairy Food Scorecard								X		2009
4-H-945-W	Dairy Foods Coaches Guide		X			X				X	2009
FB 2259	Dairy Food -Judging Scoring Milk & Cheese	X					X			X	
HGB 255	Dairy Food -How To Buy Dairy Products HGB 255	X					X			X	2007
	Dairy Food -Milk for Manufacturing Purposes	X					X			X	2005
	Dairy Food -Milker Part Photos							X**			2008
	Dairy Food -Nutrient Content of Cheese -Newer Knowledge Series			X						X	2000
	Dairy Food -Using CMT Test, U of Missouri							X		X	2005
	Dairy Food -Kinds of Other Dairy Products -Newer Knowledge Series				X				X	X	2000
	Dairy Food -Kinds of Milk -New Knowledge Series						X			X	2000
	Dairy Food -Kinds of Cheese -Newer Knowledge Series			X						X	2000
	Dairy Food -Ice Cream Facts from IDFA				X*					X	2009
	Dairy Food -Ice Cream & Frozen Products				X*					X	2000
	Dairy Food -Facts about Yogurt, DMI								X	X	2007
	Dairy Food -Facts about Milk, DMI									X	2007
	Dairy Food -Facts about Cheese, DMI			X						X	2007
	Dairy Food -Facts about Butter, DMI								X	X	2007
	Dairy Food -D100 CMT Test Instructions							X**			2009
	Dairy Food -Classification of Cheese -Newer Knowledge Series			X						X	2000
	Hoard's Dairyman, past 12 months									X**	
	X*=4-H Only										
	X**=FFA Only										