

Indiana Dairy Foods CDE

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 a maximum of three teams, regardless of division.
- c. Counties and schools can also enter junior teams. Juniors are those individuals that are in 8th grade or below. Junior teams must be designated as Consumer Division or Production Division.
- d. A team consists of 4 members with the lowest member score dropped.
- e. Plaques for top teams and top ten individual ribbons will be awarded.

III. State Contest Classes (Junior and Senior Contest)

A. The contest classes are as follows:

<u>4-H SENIOR AND JUNIOR CONSUMER DIVISION</u>		<u>FFA SENIOR AND JUNIOR PRODUCTION DIVISION</u>	
1. Milk Flavor Identification and Evaluation	54 points	1. Milk Flavor Identification and Evaluation	54 points
2. Cheese Identification	54 points	2. Cheese Identification	54 points
3. Problem Solving Class	54 points	3. Problem Solving Class	54 points
4. Ice Cream Evaluation	54 points	4a. California Mastitis Test	32 points
5. Questions on the Consumer Aspects of Dairy Products and Marketing	50 points	4b. Fat Content Identification	36 points
		5. Questions on Milk Production and Marketing	50 points
a. Contestants will be allowed 30 minutes for each class defined above. Additional time may be granted by the contest coordinator if needed.			
b. The score for each contestant is the total number of points for each class added together, for correct answers. Ties for individual awards will be broken by class (1) or by class (2), if (1) does not break the ties.			
1. Tie-breaker 3 - The individual having the highest total score, after the quiz score has been omitted, will be declared the winner.			
2. Tie-breaker 4 - The individual having the highest combined score on milk samples, problem solving and cheese identification will be declared the winner.			

B. Class Description

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1. **MILK SAMPLES** (54 points maximum)
 - Six milk samples will be scored on flavor (taste and odor) and intensity of the defect
 - 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
 - Scoring -3 points for each incorrect slight, definite or pronounced intensity assessment
-6 points for each incorrect defect marked

2. **CHEESE IDENTIFICATION** (54 points maximum)
 - 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
 - Scoring -6 points for each incorrect identification

3. **PROBLEM SOLVING** (54 points maximum)
 - 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.

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

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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 points for each incorrect identification
 - 3 points for each incorrect classification
 - 3 points for each incorrect question answer

4. **ICE CREAM SAMPLES** (4-H Senior and Junior Consumer Divisions Only, 54 points maximum)

- 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
- Scoring: -1 point for each incorrect slight, definite or pronounced flavor, body, and texture
 - defect
 - 3 points for each intensity trait that is incorrect

4a. **California Mastitis Test (CMT)** (FFA Senior and Junior Production only, 32 points maximum)

- 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
 - 2) Using CMT Test published by University of Missouri-Columbia Extension Division, Columbia, MO 65211. See www.four-h.purdue.edu
 - 3) California Mastitis Test can be ordered from NASCO—Toll free 1-800-558-9595 or www.enasco.com

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- Scoring: Each sample worth 8 points each. It will be scored on absolute value of official score minus the student’s score on each sample.

4b. **Milk Fat Content of Fresh Milk Products** (36 points maximum)

- Four samples of fresh fluid milk products will be identified according to their content of milk fat.
- The following products may be included among the samples: nonfat (skim) milk, reduced fat milk (2%), milk (3.3%), half and half (10.5%), coffee cream (18%), and whipping cream (30%).
- Scoring: Each sample will be worth 9 points.

5a. **4-H SENIOR AND JUNIOR CONSUMER WRITTEN QUESTIONS** (50 points maximum)

- Twenty-five objective questions on the consumer aspects of dairy products
- Twenty-five objective questions on milk marketing
- Scoring: 1 point for each correct answer

5b. **FFA SENIOR AND JUNIOR PRODUCTION WRITTEN QUESTIONS** (50 points maximum)

- Twenty-five objective questions on milk production
- Twenty five objective questions on milk marketing
- Scoring: 1 point for each correct answer

References for both 4-H and FFA questions:

- 1) 4-H 945 4-H/FFA Dairy Foods Contest Coaches’ Guide (2009) Purdue University. Available on line at: www.four-h.purdue.edu (click on “Search” and type in Dairy Food under the “Download Search” and click search.
- 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.

IV. Score Sheets

<p>4-H 653 4-H 654 4-H 656 4-H 657 4-H 714 4-H 657</p>	<p>Milk Samples Identification of Cheese Ice Cream California Mastitis Test Problem Solving Milk Fat Content</p>	<p>Available from Indiana 4-H Website: www.four-h.purdue.edu click on “Search” type in Dairy Food under “Download Search” and click search</p>
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REFERENCE LIST:

Pub No.	Title of Publication on Indiana 4-H Website: www.four-h.purdue.edu	Overall	Coaches	Classes 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

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4-H 945-W	Dairy Foods Coaches Guide		X			X			X	2009
FB 2259	Dairy Food – CDE 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 – Nutrient Content of Cheese – New Knowledge Series			X					X	2000
	Dairy Food – Using CMT Test, U of Missouri						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 Senior and Junior Consumer Only
X**=FFA Senior and Junior Production Only

Updated: 9/2014