

FFA Dairy Foods
2007 Dairy Foods Examination

Please answer each question by filling in the appropriate circle on your answer sheet. Make sure that your name and school are clearly filled in on the answer sheet.

1. Fluid whole milk contains not less than _____ milk fat, and fat-free or skim milk contains less than _____ milkfat.
 - a. 2 %, 1%
 - b. 3%, 1.25%
 - c. 3.25%, 0.5%**
 - d. 8.25%, 1.5%

2. The fat content of reduced fat milk is _____.
 - a. 0.5%
 - b. 1.0%
 - c. 2.0%**
 - d. 3.25%

3. Designed to increase milk production in dairy cows, recombinant bovine somatotropin (rBST) was approved for commercial use, in the United States, in _____.
 - a. 1980
 - b. 1987
 - c. 1994**
 - d. 2000

4. Milk products contain high quality proteins. The two major fractions of proteins are the whey and casein proteins. These are present in fluid milk in the approximate ratio of (whey:casein):
 - a. 80:20.
 - b. 1:4.**
 - c. 1:1.
 - d. 1:2.

5. Which of the protein fractions forms the major structure of cheeses?
 - a. Neither cheese is predominantly fat.
 - b. Whey proteins
 - c. Lactose proteins
 - d. casein**

6. In cheese production, curd formation results from introducing a coagulating agent such as rennet. The enzyme coagulates milk by precipitating _____.
 - a. casein**
 - b. lactose
 - c. lactase
 - d. lipids

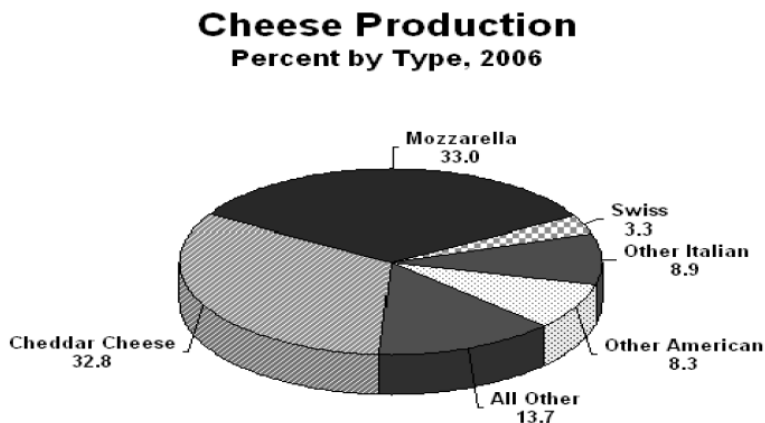
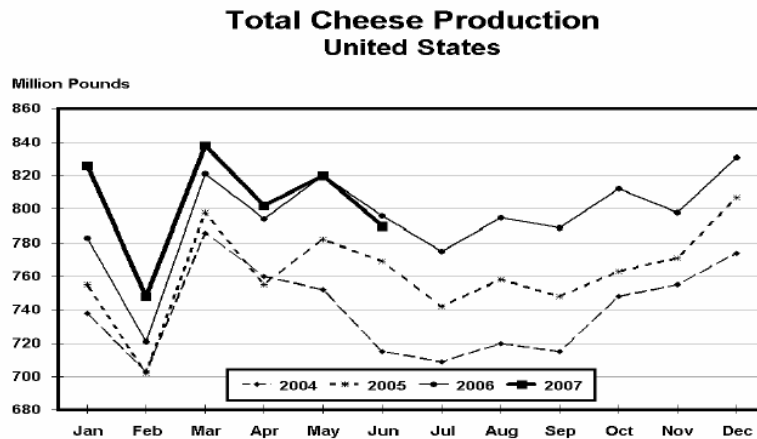
7. Cheese contains, in a concentrated form, many of milk's nutrients. About _____ pounds of whole milk are needed to make 1 pound of whole milk cheese.
 - a. 2
 - b. 10**
 - c. 22
 - d. 36

8. In addition to the coagulating enzyme rennet, what else is added to most cheese milk (Cheddar for example) to aid in coagulation?
- lipids
 - acid
 - starter culture bacteria**
 - annatto
9. _____ results in a shelf stable product that does not require refrigeration until opened.
- UHT: Ultra High Temperature pasteurization**
 - HTST: High Temperature Short Time pasteurization
 - UP: Ultra Pasteurization
 - Pasteurization at 145 degrees F for not less than 30 minutes
10. Which of the following products would typically contain the highest level of calcium by volume?
- Whole milk
 - Lowfat 1% milk
 - Reduced Fat 2% milk
 - Evaporated Canned milk**
11. Milkfat carries the following fat soluble vitamins:
- A, D, E, and K**
 - B, B12, D and K
 - C, A, E and K
 - D, riboflavin, niacin and C
12. _____ the disruption of fat globules in milk to reduce the separation of cream.
- Pasteurization is
 - HACCP is
 - Homogenization is**
 - Production of lowfat dairy products is accomplished through
13. Why are Vitamins A and D added to reduced fat milks?
- to supplement the amount that is already present.
 - to replace the amount that was lost in skimming the milk.**
 - because it makes the milk more marketable.
 - improve efficiency and profitability.
14. Pasteurization
- kills all organisms in milk.
 - kills only somatic cells.
 - kills all illness causing bacteria.**
 - sterilizes the milk.
15. The legal requirements for pasteurization are:
- 145° for 30 minutes.
 - 161° for 15 seconds
 - 201° for 0.1 seconds.
 - All of these are correct.**

16. Bovine spongiform encephalopathy has resulted in
- a. a prohibition against using most mammalian protein sources to manufacture animal feeds given to ruminant animals.**
 - b. an increased number of cases of Mad-cow disease in the United States.
 - c. decreased regulation of animal and animal product imports into the United States.
 - d. a ban on all animal product exports from the United States to the European Union.
17. Recently consumption of dairy products has been shown to assist in:
- a. weight reduction.**
 - b. prostate cancer.
 - c. maintenance of thyroid.
 - d. reduction of Alzheimer's disease.
18. The recommended amount of dairy foods for the above effect is:
- a. 1 serving per day.
 - b. 2 servings per day.
 - c. 3 servings per day.**
 - d. 4 servings per day.
19. Recommended consumption of dairy products based upon the new Food Guide Pyramid is:
- a. dependent upon the age of the consumer.**
 - b. dependent upon the fat level of the dairy product consumed.
 - c. always less than 2 servings per day.
 - d. two of the three above are true.
20. According to the New Food Guide Pyramid, a human of your age should consume:
- a. 1 serving of ice cream a day
 - b. 3 servings of low fat dairy products a day.**
 - c. 4 servings of cheese each day.
 - d. 1 cup of milk each day.
21. Overrun in ice cream refers to:
- a. the amount of air whipped into the ingredients.**
 - b. the amount of splash over as it is packaged.
 - c. the amount that is produced that consumers do not eat and is returned.
 - d. how much they add to the carton.
22. The minimum amount of fat allowed in vanilla ice cream is:
- a. 7.5%
 - b. 10.5%**
 - c. 12%
 - d. 16%
 - e.
23. Under which of the following weather conditions would you expect to observe the greatest decreases in milk yield per cow and in percentage of fat and protein in that milk?
- a. cold and dry
 - b. hot and humid**
 - c. cool and rainy
 - d. warm and dry

24. To preserve the quality of milk, use proper containers to protect milk from exposure to _____, which can reduce riboflavin, ascorbic acid, and vitamin B6. Always refrigerate milk at _____ degrees F or less.
- strong fluorescent lights, 40**
 - oxygen, 32
 - bacteria, 36
 - heat, 45
25. Yogurt is the product resulting from the culturing of a mixture of milk and cream products with the lactic acid-producing bacteria, *Lactobacillus bulgaricus* and *Streptococcus thermophilus*. The lactic acid increases shelf life by _____.
- creating a slightly sour taste.
 - lowering pH and inhibiting the growth other bacteria.**
 - creating a thicker, creamier texture.
 - destroying the *Lactobacillus bulgaricus*.
26. The Journal of the American Medical Association acknowledges that adoption of the Dietary Approaches to Stop Hypertension (DASH) eating plan may be effective in reducing the risk of heart attack and stroke by lowering blood pressure. The DASH eating plan includes _____.
- a restriction in the quantity of milk and dairy products consumed.
 - 2 to 3 servings of lowfat dairy foods daily.**
 - a reduction in calcium intake by limiting servings of dairy products to 2 to 3 servings daily.
 - a reduction in lactic acid consumed by reducing yogurt intake.
27. In adults, a calcium deficiency, along with other factors, may result in bone deterioration called _____. The recommendations for calcium are: 1000 milligrams for adults, _____ milligrams for adolescents, 500-800 milligrams for young children, and 1200 milligrams for adults over 51 years of age.
- osteoporosis, 1300**
 - osteoporosis, 1000
 - macrodegeneration, 1300
 - macrodegeneration, 1000
28. The Grade A Pasteurized Milk Ordinance (PMO) is essentially a set of requirements for:
- product safety
 - milk hauling
 - sanitation
 - all of the above**
29. The favorite ice cream flavor is?
- chocolate
 - neopolitan
 - blue
 - vanilla**

30. Based upon previous years, cheese production in 2007 is most likely going to:
- Drop and then continue to decrease.
 - Drop and then increase to the end of the year.**
 - No comparison is possible because the last years data is faulty.
 - Drop and then increase before dropping during December.
31. The percentage of American cheese produced in 2006 was _____% .
- 3.3
 - 8.3**
 - 32.8
 - 13.7
32. Blue cheese production falls under which category?
- Italian
 - Other Italian
 - Other American
 - All Others.**
33. Which month has the historically highest production level of cheeses?
- January
 - March
 - July
 - d.. December.**



34. In 1939, the cost of a hundredweight (cwt) of milk in Iowa averaged?
 a. \$1.85 b. **\$2.10** c. \$2.35 d. 13 cents
35. In 1939, the most inexpensive milk to buy at the store was found in what state?
 a. **Iowa** b. California c. Colorado d. Illinois.
36. The additional cost of home delivered milk was about?
 a. 10 cents b. 13 cents c. **1 cent** d. \$1.00
37. Where was the highest fat test milk available?
 a. Los Angeles b. Cedar Rapids c. **Miami** d. Phoenix

12/12/39

December 1939 Milk Price Report

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DEALERS' BUYING AND SELLING PRICES FOR MILK, DECEMBER 1939

MARKETS	Buying price 1/ for raw milk (flat price or 5.5% fat basis) F.O.B. city per cwt.	Allow- ance per 1/10 percent butter- fat per cwt.	Selling prices 2/				Pre- vailing fat test of milk sold by dealers Percent
			Wholesale		Retail		
			In lots of 5-20 gal. in bulk per gal.	Bottled per qt.	Deliv- ered to homes bottled per qt.	At stores bot- tled per qt.	
Alabama (S)	Dollars	Cents	Cents	Cents	Cents	Cents	Percent
Birmingham	2.85	3.0	-	12	15	14	4.0-4.5
Mobile	2.65	3.0	40	11½	14	14	-
Arizona							
Phoenix	1.84	5.25	35	9	12	11	-
California							
Fresno	Butter Market Basis		33	9	12	11	4.0
Los Angeles	2.24	6.4	26	6½-7½	10-12	7½-10	3.5-4.0
Sacramento	2.58	-	27	8½	11	10	3.4-3.8
San Diego (F)	2.52	7.2	35	10½	13	12	4.0
San Francisco	2.48	7.1	33½	9½	12½	11½	5.6-4.0
Santa Barbara	2.42	6.9	27	10½	13	12	4.0-4.5
Colorado							
Colo.Springs	Not determined		30	8½	10	10	3.8-4.0
Denver (F)	2.10	6.0	30	8½-9	11-12	10	3.2-3.5
Pueblo	1.92	5.5	-	-	12	11	3.9
Connecticut (S)							
Bridgeport	3.23	4.0	40	11	14	13	-
Hartford	3.23	4.0	40	11	14	13	3.8-4.0
New Haven	3.23	4.0	40	11	14	13-14	3.8-4.0
Dist.of Columbia							
Washington	3.19	6.0	40	12	14	11-14	4.0-4.1
Florida (S)							
Jacksonville	3.25	Flat	48	14	16	16	4.2-5.2
Miami	3.32	3.0	50	14	16	-	4.2-4.4
Tampa	-	-	48	15	15	15	3.5-4.4
Georgia (S)							
Macon	2.78	3.0	40	11	14	13	4.0-4.7
Idaho							
Wallace	2.50*	Flat	38	11	13	13	3.8
Illinois							
Champaign	1.84	5.26	32	9	11	11	4.0
Chicago (F)	Not determined		30-34	9½	13	10½-11	3.6-3.7
Joliet	Not determined		34	10	12	12	3.8
Quincy	1.81	3.0	25	8	10	10	-
Rockford	Not determined		32	6	10	10	3.7
Indiana							
Elkhart	2.01	3.0	32	9	11	11	4.0
Evansville	1.82	5.2	34	9½	11	11	3.76-3.
Gary	-	-	34	9	11½	11½	3.5
Indianapolis	2.03	3.0	30	8½	11	10	3.7-3.8
South Bend	2.27	3.0	35	10	12	12	3.7-3.9
Iowa							
Burlington	2.25	3.0	30	8½	10	10	4.0
Cedar Rapids	1.85	3.0	24	6	10	6-8	3.8
Davenport	2.10	3.0	30	9	11	11	3.8
Des Moines	2.00	B.M.Basis	34	8½	11	10	3.7
Fort Dodge	2.20	3.0	36	9	11	11	3.8
Mason City	2.20	4.0	30	9	11	11	4.1
Ottumwa	2.00	4.0	30	8	10	10	4.0
Sioux City (F)	2.25	3.5	32	9	11	10	3.7

38. In 1962, Iowa was what ranking in the manufacture of butter?
 a. first b. second c. **third** d. fifth.
39. Which state produced the most Ice Cream in 1962?
 a. California b. Minnesota c. **New York** d. N. Atlantic
40. Which state was going to produce the most ice cream in 1963?
 a. California b. Minnesota c. **New York** d. N. Atlantic

Table 8.-Creamery butter, American cheese and ice cream: Production, by States, 1962-63

State and division	Creamery butter		American cheese		Ice cream	
	1962	1963	1962	1963	1962	1963
	Enumeration	Estimate	Enumeration	Estimate	Enumeration	Estimate
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 gallons	1,000 gallons
Maine	109	1/	-	-	5,931	1/
New Hampshire	1/	1/	-	-	1,200	1/
Vermont	6,551	4,220	6,558	1/	397	1/
Massachusetts	1/	1/	-	-	29,949	31,910
Rhode Island	1/	-	-	-	2,884	1/
Connecticut	-	-	-	-	9,128	8,865
New York	67,010	57,830	35,821	33,725	74,931	76,535
New Jersey	1/	1/	1/	1/	18,211	19,650
Pennsylvania	20,518	17,820	2,491	1/	71,272	75,240
Other N.A. States	38	145	223	9,670	-	10,455
N. Atlantic	94,225	80,015	45,093	43,395	213,903	222,555
Ohio	45,777	36,350	14,051	14,220	39,413	41,150
Indiana	27,719	26,900	34,452	35,480	28,840	29,040
Illinois	35,206	26,140	27,892	28,700	38,355	39,070
Michigan	57,287	50,670	27,804	30,220	32,304	33,720
Wisconsin	324,569	308,180	464,049	486,360	23,968	23,880
E. N. Central	490,558	448,240	568,248	594,980	162,880	166,860
Minnesota	353,355	345,450	51,035	57,790	19,418	20,810
Iowa	171,080	161,060	53,805	65,290	9,759	9,665
Missouri	46,549	39,110	94,999	96,060	19,054	19,745
North Dakota	52,763	44,760	10,435	1/	2,622	4,805
South Dakota	36,919	33,090	18,380	1/	1,925	1/
Nebraska	54,586	49,090	2,467	1/	8,802	10,230
Kansas	28,791	22,680	17,057	15,200	6,623	6,025
Other W.N. Central States	-	-	-	34,780	-	-
W. N. Central	744,043	695,240	248,178	269,120	68,203	71,280
District of Columbia	-	-	-	-	7,573	7,415
Delaware	-	-	-	-	4,930	1/
Maryland	9,007	7,645	-	1/	13,279	13,820
Virginia	3,172	2,410	1/	1/	12,803	12,760
West Virginia	1/	1/	-	-	4,733	4,730
North Carolina	287	1/	1/	1/	14,687	14,860
South Carolina	341	1/	-	-	3,013	1/
Georgia	272	1/	1/	1/	8,426	7,960
Florida	-	1/	-	-	19,161	18,955
Other S. A. States	113	615	9,987	8,485	-	8,295
S. Atlantic	13,192	10,670	9,987	8,485	88,605	88,795
Kentucky	17,329	16,470	68,698	64,440	4,874	1/
Tennessee	10,568	8,380	39,968	36,995	14,662	14,710
Alabama	1/	1/	4,421	3,145	7,906	7,970
Mississippi	5,048	3,225	15,035	12,250	3,516	1/
Arkansas	1/	1/	19,319	14,370	2,661	1/
Louisiana	2,520	1/	252	1/	7,691	6,955
Oklahoma	14,966	12,130	8,643	8,485	5,320	5,470
Texas	5,249	3,485	3,715	3,040	22,011	22,400
Other S. C. States	2,884	3,890	-	335	-	11,055
S. Central	58,564	47,580	154,051	143,060	68,641	68,560
Montana	3,858	3,820	3,908	3,870	2,078	1/
Idaho	35,755	33,485	30,402	32,365	3,245	1/
Wyoming	2,404	2,480	-	-	538	1/
Colorado	8,925	7,785	1,796	1/	8,201	8,540
New Mexico	246	1/	-	-	1,329	1/
Arizona	1/	1/	-	-	3,341	1/
Utah	7,604	7,320	5,239	5,280	3,942	1/
Nevada	1/	1/	1/	1/	886	1/
Other Mt. States	664	355	283	1,075	-	15,715
Mountain	59,456	55,245	41,630	41,990	23,560	24,255
Washington	23,444	22,185	4,110	3,810	13,328	13,610
Oregon	11,546	10,050	19,754	18,665	5,679	5,770
California	39,516	31,975	2,671	1,945	56,966	59,205
Pacific	74,506	64,210	26,535	24,420	75,973	78,585
United States	1,534,545	1,401,200	1,093,722	1,125,450	701,765	720,990

1/Production data for this State are included in "Other States" and the total for this region.