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Chapter Ag 30

MILK PRODUCTION, MINIMUM STANDARDS

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Ag 30.01 Farm inspection. (1) **WHEN MADE.** Every producer of milk and cream shall permit the operator or authorized fieldman of the dairy plant to which he is then delivering his milk or cream to make an inspection of his producing premises at least once each year, and more frequently as necessity is indicated by the results of tests used to determine the quality of milk or cream, or when the premises are found in noncompliance with the minimum farm production requirements as herein provided.

(2) **REPORT.** After each such inspection a copy of an accurately completed inspection report shall be furnished to the producer and he shall promptly undertake the correction of the conditions which fail to comply with the minimum farm production requirements as herein provided.

(3) **ITEMS TO BE INSPECTED.** Inspection of the producing premises shall mean and include the examination or inspection of the items specified in paragraphs (4) to (18) and the checking thereof on the basis of the minimum requirements therein provided.

(4) **COWS.** All milk and the cream produced therefrom, offered for sale, shall be drawn from clean healthy cows.

(5) **PERSONNEL.** Only clean and healthy persons shall be permitted to milk the cows and to handle the milk or milk utensils.

(6) **DAIRY BARNs.** The floors and gutters of all dairy barns where cows are milked shall be constructed of concrete or other approved impervious and easily cleaned material. They shall be kept clean and in good repair. Walls and ceilings shall be kept clean and in good repair, and shall be whitewashed or painted as often as necessary to keep them in a sanitary condition. The barn where any milking cows are kept or milked shall be provided with sufficient light properly distributed throughout. Dairy barns shall be well ventilated and so arranged as to avoid over-crowding. No swine, sheep, goats or fowl shall be housed or permitted in the milking stable. All manure shall be removed daily from the milking stable and disposed of in such a manner as to be inaccessible to the milking herd.

(7) **COW YARD.** The cow yard shall be well drained and properly graded so as to be free of standing pools of water. It shall be kept free from accumulations of manure. Swine shall not be permitted in the cow yard.

(8) **TOILETS.** All toilets on every dairy farm shall be of a sanitary type so constructed and maintained that waste is inaccessible to flies and rodents and does not pollute the surface soil or contaminate the water supply.

(9) **INSECTS AND RODENTS.** The premises shall be so maintained, and the product and equipment so handled as to prevent contamination by insects or rodents.

(10) **WATER SUPPLY.** An adequate supply of safe, clean water shall be provided for the dairy herd and for the cleaning of dairy utensils and equipment.

(11) **MILK UTENSILS AND EQUIPMENT.** (a) *Construction.* Milk utensils and equipment used in the handling, storage and transportation of milk or milk products shall be made of smooth, non-absorbent material and shall be of a construction which is seamless or with all seams soldered flush so as to be easily cleaned. They shall be kept in good repair. No galvanized or enamel ware utensils shall be used for milk or cream.

(b) *Cleaning.* Milk utensils and milk contact surfaces of equipment shall be rinsed with lukewarm water immediately after usage, then brushwashed with hot water containing an effective detergent and thoroughly rinsed. Just before use they shall be sanitized with a safe, effective bactericide. Farm bulk tanks shall be similarly cleaned and sanitized upon removal of the milk. Other effective cleaning and sanitizing methods may be used with the approval of the department.

(c) *Storage.* Utensils used in the production, handling or storage of milk or cream shall be stored in a clean, well-ventilated, enclosed structure in such a manner as to protect from contamination surfaces with which milk or cream comes in contact. They shall be inverted separately (not nested) on a suitable rack. The bottom bars of the rack shall be high enough to avoid contamination from below.

(14) **MILKING.** The flanks, bellies and tails of cows shall be free from visible dirt at the time of milking. The udder and teats of all milking cows shall be wiped immediately before milking with a clean cloth or other approved material dipped in a sanitizing solution satisfactory for that purpose. Washing or spraying can be substituted if udder and teats are wiped dry.

All abnormal milk shall be kept out of the milk supply. The milker's hands shall be washed clean. Wet hand milking is prohibited. No dry, dusty or objectionable strong-flavored feeds shall be fed to cows just before or during milking. Milk stools shall be kept clean and stored in a clean place.

(15) **STRAINING.** Milk shall not be strained except through a clean single service filter. A filter shall not be used for more than 20 gallons of milk. The producer shall examine the filter and use it as his own sediment test and as a guide in grading his own production methods.

(16) **COOLING.** Milk shall be cooled immediately after milking throughout the year unless it is delivered for receipt at the milk plant within 2 hours after milking. Cooling tanks shall be kept clean and located in a clean place away from contaminating surroundings. The watering of livestock at tanks used for the cooling of milk or cream is prohibited.

(17) PLACES FOR HANDLING OF MILK, CREAM AND DAIRY EQUIPMENT. If milk is strained it shall be strained in such a place and in such a manner as to eliminate any possible contamination. Milk and cream containers and utensils shall be cleaned and washed in the milk house, milk room, or in some other place suitable for that purpose, but they shall be stored as provided in (18) (a). Milk and milk products shall be cooled and stored as provided in (18).

(18) (a) MILK HOUSE. Every producer of milk or cream shall have and maintain a milk house or milk room in which the cooling and storing of milk and milk products and the storing of milk containers and utensils shall be done. Such house or room shall not be used for any other purpose likely to result in contamination. It shall be equipped with a cooling tank or cooling equipment and utensil storage facilities. Any type or design of tank or equipment for cooling which can be kept clean and sanitary may be used by the producer. The milk house or milk room shall be of construction which permits easy cleaning and have adequate drainage. It may be a part of the barn or another building, but shall be partitioned, ceiled and screened to prevent the entrance of dust, dirt, flies and other pests or contamination. There shall be no entrance directly from the barn, except through a vestibule. Outer doors shall open outward and be self-closing, unless other effective means are provided to prevent the entrance of flies. There shall be ample light to promote cleanliness and adequate ventilation to reduce likelihood of odors or condensation. Other construction details required by any Grade A regulation or any other market specifications shall not be construed as a part of this order.

(b) When bulk tanks are used for holding and cooling milk at farms they shall be installed in a milk house or milk room. Such house or room shall have a floor of concrete or other impervious material and a trapped floor drain. The tank shall not be located over the floor drain or under a ventilator. It shall have at least 24 inches clearance at the milk outlet side and at least 18 inches clearance at two other sides; provided, that non-conforming tank installations made prior to January 1, 1960 may be approved by the department, in writing, if they can be effectively cleaned and sanitized. A port opening for milk conducting equipment, not more than 6 inches in diameter, shall be in an outside wall, and an exterior apron of concrete or other impervious material, not less than 4 feet by 4 feet in size, shall be adjacent to the wall and centered on the opening. The base of the opening shall be at least 6 inches above the apron and the floor of the milk house or room. The opening shall have a tight-fitting cover which is self-closing. The milk house or milk room shall have a pressure water supply and a water heater of not less than 30-gallon capacity. When a cleaned-in-place stationary pipeline is used, the capacity of the water heater shall be at least 50 gallons if the length of the pipeline is not over 100 feet, 60 gallons if over 100 feet but not over 200 feet, and 80 gallons if over 200 feet.

History: 1-2-56; renum. (11) to be (11) (a) and am., renum. (12) and (13) to be (11) (b) and (c) and am., renum. (18) to be (18) (a), cr. (18) (b), Register, October, 1959, No. 46, eff. 11-1-59.

Ag 30.015 Farm bulk tanks. (1) BULK TANKS. Bulk tanks used for holding and cooling milk at farms shall conform to the sanitary standards of construction and cooling prescribed in this section.

(2) **CONSTRUCTION.** The tank shall be self-draining. Its lining shall be made of stainless steel. Other parts having contact with milk or having surfaces from which milk may drain or drop into the tank shall be made of stainless steel or material that is non-toxic, stable, non-absorbent, corrosion-resistant, capable of withstanding cleaning and bactericidal treatment, and which has a smooth surface. Milk contact surfaces shall be visible, easily accessible, and readily cleanable. Openings shall have covers which are self-draining. Openings and covers shall be constructed and installed so as to prevent drainage into the milk compartment. Each tank shall have an indicating thermometer, with a minimum range of 32° F. to 80° F., and a mechanical agitator which will insure homogeneity of the milk within 5 minutes of operation.

(3) **COOLING.** Tanks shall be capable of cooling milk from the first milking to 50° F. within one hour and of preventing the blend temperature from rising above 50° F. at any time during the addition of subsequent milkings.

Note: Tanks which conform to the "3-A Sanitary Standards" published by the International Association of Milk and Food Sanitarians, Inc. in the Journal of Milk and Food Technology will meet the requirements of this section.

History: Cr. Register, October, 1959, No. 46, eff. 11-1-59.

Ag 30.02 Milk and cream transportation. (1) Every vehicle used to transport milk or cream from producers to any dairy plant shall be in a sanitary condition. Every vehicle so used shall be enclosed to protect the milk or cream from extreme heat or cold and from dust or other contamination; provided, however, that this provision shall not be applied to producers delivering their own milk or cream. Such producers shall properly protect such products while in transit with suitable covering during periods of extreme heat or cold, or storm, or other inclement weather. The term "enclosed" as used in this paragraph shall mean and include attached covered van bodies or any other combination of rigid walls and insulated top covering as will be sufficient to exclude wind, dust and moisture. The side walls shall be of a height at least equal to the tier or tiers of cans transported, shall be constructed of sheeting or matched lumber, and shall be maintained without holes or apertures. One swinging or removable gate will be permitted on each side wall if such gate is securely fastened during travel in a fitted frame provided with stops to keep out wind, dust and moisture. The top shall consist of at least two layers of canvas with insulation one-half inch thick between them. Such top shall be tightly laced or otherwise securely fastened to the upright walls during travel.

Note: When the gross weight of the truck ordinarily used on any regular milk route is in excess of the limitation of any valid gross weight restriction, the "enclosed vehicle" provisions of section Ag 30.02 (1) do not apply to any vehicle used in place thereof during the time that such weight restriction remains in effect as to any highway which is a part of such route; provided that, all milk being transported by a vehicle being operated in lieu of the enclosed vehicle during such periods of suspensions shall be covered with a canvas or tarpaulin to protect it from extreme heat or cold and from dust or other contamination.

(2) When skim milk, buttermilk or whey is being transported to the producers in the same vehicle used to transport milk or cream, such skim milk, buttermilk or whey shall be contained in a tank outside of the milk enclosure or in a sealed tank within the enclosure. Such sealed tank shall have exterior inlets and outlets.

(3) Cans used for the transportation of milk or cream shall not be used for the transportation of skim milk, buttermilk or whey. No person shall knowingly place skim milk, buttermilk or whey in such cans, nor transport such cans containing such by-products.

(4) No person transporting milk or cream from producers to any dairy plant shall unload any of the cans of such milk or cream, or any part thereof, at any place other than the dairy plant unless such unloading point is an adequate structure properly enclosed to protect the milk or cream from extreme heat or cold and from dust or other contamination.

(5) When cans of milk or cream are not picked up from the producer's cooling tank or milk house but are picked up at the roadside, the producer shall provide an enclosed structure to protect the milk or cream from extreme heat or cold and from dust or other contamination. Empty cans when returned shall be placed in such structure.

(6) No person shall knowingly deliver to any dairy plant any insanitary milk or cream or any milk or cream which has been rejected at any plant because it was insanitary.

Ag 30.03 Test methods, standard. The procedures for performing the various tests, except where otherwise specifically permitted and approved by the department, shall be those prescribed in the book "Standard Methods for the Examination of Dairy Products", Tenth Edition (1953), copies of which are on file at the offices of the state department of agriculture, secretary of state and revisor of statutes, and which may be obtained from American Public Health Association, Inc., 1790 Broadway, New York 19, N. Y.

Ag 30.04 Bacteriological quality. (1) Every plant receiving any milk directly from producers shall at least twice each month apply a bacteriological test to the milk delivered by each producer.

(2) When the Methylene Blue test is used the results shall be judged as follows:

(a) Milk, the samples of which are not decolorized within 5½ hours, shall be recorded as "Number 1."

(b) Milk, the samples of which are decolorized within 5½ hours but not decolorized within 2½ hours, shall be recorded as "Number 2."

(c) Milk, the samples of which are decolorized within 2½ hours, shall be recorded as "Undergrade."

(3) When other tests such as the Resazurin, the Direct Microscopic or the Agar Plate Count are used to judge the bacteriological quality of milk received at the dairy plant, the plant using such test shall contact the department for standards to be used in order that the results obtained can be correlated with the results of the Methylene Blue test as given in paragraph (2) hereof. The results in all cases shall be recorded as Number 1, Number 2 and Undergrade.

(4) When the milk delivered by any producer tests Undergrade, the milk from such producer shall be tested at least weekly until the conditions have been corrected or until the patron has been excluded from the market. To assist the producer to correct the conditions, the processor shall promptly inspect the premises and equipment of the producer of such milk and advise him of necessary repairs and changes in production procedure.

Ag 30.05 Sediment tests. (1) Every plant receiving any milk or cream direct from producers shall at least twice in each month conduct sediment tests of one or more cans, at random, of the milk or cream delivered by each producer. If any of the cans of milk or cream selected at random are in excess of Number 2 as hereinafter described, every can of that patron's milk or cream shall be tested.

(2) The tester used shall be an "off the bottom" type approved by the department. It shall take a one-pint sample. It shall be kept in good repair. The test shall be conducted by drawing the head of the tester across the bottom of the original container of unstirred milk or cream once simultaneously with the upstroke of the plunger.

(3) Sediment discs shall be graded by comparing them when wet with the discs on a standard chart prepared according to the following standards:

The Number 1 disc on the chart shall contain no sediment.

The Number 2 disc on the chart shall contain 0.5 milligrams of sediment.

The Number 3 disc on the chart shall contain 2.5 milligrams of sediment.

The sediment mixtures used in the preparation of the chart shall be those designated by the procedure outlined in "Standard Methods for the Examination of Dairy Products" (see section Ag 30.03).

(4) All pads containing no more sediment than that shown on the Number 3 standard disc shall be graded to the nearest disc. All milk or cream, the test pads of which contain sediment in excess of that shown on the Number 3 standard disc, shall be graded Number 4 and shall not be accepted but shall be returned to the producer. All milk which shows any evidence of being watery, flaky, stringy, bloody, thick, gargety or otherwise adulterated shall not be accepted, but shall be returned to the producer as "reject milk."

(5) All producers delivering Number 3 sediment milk or cream shall be warned of the quality of their product. Whenever a producer delivers milk or cream with a Number 3 sediment content, every can of milk or cream delivered by such producer on the following day shall be tested for sediment. Such tests shall be conducted on each succeeding day until all of the cans of milk or cream from the producer qualify on the sediment test as Number 2 or better or until the producer has been excluded from the market.

(6) This section shall apply to farm bulk tank milk, except that sediment testing shall be by the mixed sample method (after agitation for 5 minutes), with size of sample and filtering area based on the 8 to 1 relation between off-bottom can tests and mixed sample tests. Such tests may be conducted once each month.

History: 1-2-56; cr. (6), Register, October, 1959, No. 46, eff. 11-1-59.

Ag 30.06 Organoleptic tests. Every dairy plant receiving milk or cream shall make visual and olfactory inspection (by sight and smell) of all milk and cream before accepting the same and shall reject every can of milk or cream which has undesirable flavors or odors, or which contains any foreign substance or is unwholesome or otherwise insanitary or adulterated.

Ag 30.07 Cream grading. (1) Every dairy plant receiving any cream shall make organoleptic tests of all such cream and shall con-
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duct tests for sediment and for acidity of one or more cans, at random, of the cream delivered by each producer or other supplier. The term "cream" as used in this order shall include whey cream and all butterfat in cream form.

(2) All cream purchased shall be graded on the basis of such tests as follows:

(a) Class 1. (Desirable) Cream with acidity not in excess of 0.18 per cent acidity, sediment not in excess of Number 2 and no off-flavors.

(b) Class 2. (Acceptable) Cream with acidity not in excess of 0.30 per cent acidity, sediment not in excess of Number 2 and but slight off-flavor.

(c) Class 3. (Warning grade) Cream with acidity in excess of 0.30 per cent acidity, contains Number 3 sediment, or is decidedly off-flavor.

(d) Class 4. (Reject cream) Cream which contains sediment in excess of Number 3 or other extraneous matter, or cream which is actively foamy, rancid, decomposed, or which has any other condition which makes it unsuitable for human food.

(3) Every dairy plant shall within 48 hours notify each producer or other supplier who delivers Class 3 or Class 4 cream of the grade of such product and the reasons for such grades.

(4) Every dairy plant shall reject all Class 4 cream. If any producer or other supplier has made 4 consecutive deliveries of Class 3 cream, all cream of that grade delivered by such producer or other supplier shall be rejected until he shall have established by the delivery of Number 1 and Number 2 cream that he has corrected the condition which resulted in the lower grade.

Ag 30.08 Exclusion of producers from the market. (1) Every operator of a licensed dairy plant shall refuse to purchase or accept the milk or cream of any producer—

(a) If the milk delivered by such producer has been of undergrade bacteriological quality for 4 consecutive weeks, or

(b) If any part of the milk or cream delivered by such producer has been found to contain Number 3 sediment or more for a period of 6 consecutive days or, if not delivered daily, for 4 consecutive deliveries, or

(c) If any part of the milk or cream delivered by such producer has been rejected for 4 consecutive deliveries because of flavor, odor, adulteration or other abnormal conditions, or

(d) If such producer refuses to correct conditions on the producing premises to bring the same in compliance with the minimum production requirements after the conditions requiring correction have been directed to his attention on 2 inspection reports; provided, however, that when the required correction necessitates some major capital improvement, a reasonable time may be granted to complete such improvement, or

(e) If such producer refuses to permit the inspection of his producing premises.

(2) Whenever the operator of any dairy plant shall have refused to purchase the milk or cream of any producer for any of the reasons set forth in (1), such producer shall not thereafter sell nor offer to

sell any milk or cream produced by him for human consumption or to be processed or manufactured for food for man until authorized in writing by the department.

History: 1-2-56; am. (1) (b) and (c), Register, October, 1959, No. 46, eff. 11-1-59.

Ag 30.09 Required inspections. (1) The operator of every dairy plant receiving milk or cream directly from producers shall inspect, or cause to be inspected by his authorized fieldman, the premises of each producer-patron at least once each year and more frequently as necessity is indicated by the results of the tests used to determine the quality of the milk or cream, or when the premises are found in noncompliance with the minimum farm production requirements as herein provided.

(2) An inspection report of the type prescribed by the department shall be accurately completed to record conditions at the producing farm; provided that dairy plants may use their own form of inspection report if it is first approved by the department. One copy of such report shall be filed at the dairy plant and one copy shall be left with the producer to assist him in producing milk or cream of desired quality.

(3) Reinspections of the producer's premises which are found in noncompliance of minimum farm requirements shall be made within 30 days. Such inspections shall continue at intervals of 30 days until the production conditions have been corrected or until the producer has been excluded from the market.

Ag 30.10 Records and reports. (1) The operator of every dairy plant receiving any milk or cream directly from producers shall keep and maintain at the plant orderly records which shall include at least the following:

(a) The producer's number.

(b) The dates on which bacteriological and sediment tests are made.

(c) The results of such tests and retests.

(d) The cans of milk or cream of each patron rejected and the cause of such rejection.

(e) A monthly summary of the tests made showing the number of samples tested, bacteriologically and for sediment, and the number of samples in each classification.

(2) The operator of every dairy plant receiving milk or cream directly from producers shall test the milk or cream of each new patron for sediment on the day of starting delivery, and for bacteriological quality at least once in the first 7 delivery days. The records at the plant shall disclose the starting and quitting dates of each patron and the results of the above required tests.

(3) All patrons' records required by this regulation shall be retained for a period of not less than 12 months.

(4) Records of quality tests shall be reported to the patrons. Reports of Undergrade bacteriological tests shall be made to the patron within 24 hours after the results of such tests are available.

(5) Within 12 hours after a plant has discontinued purchasing of milk or cream of any producer because of noncompliance with quality standards as herein provided, the operator shall report such action to the department or to its duly authorized local inspector.

(6) Whenever any dairy plant has discontinued purchasing the milk or cream of any producer because of noncompliance with quality standards as herein provided and has notified the department as prescribed in (5), such patron's milk or cream may not be accepted by any other dairy plant until authorized by the department.

(7) When a producer discontinues delivery at one plant and begins delivery to a different plant for any reason, he shall first supply such new buyer with a copy of the record of his milk or cream quality and farm inspections, if any, covering the past 3 months at his former market as furnished by the previous buyer. Such previous buyer shall furnish the producer with a copy of such record within 24 hours upon request of the producer. The new buyer shall not accept the milk or cream of such new patron without such record unless he first determines that the previous buyer has refused, or is unable to furnish a copy of the records. The new buyer shall immediately report such failure or refusal to the department.

Ag 30.11 Inspection by department. It shall be the duty of the authorized department dairy inspector assigned to the area to:

(1) Examine the records of the bacteriological and sediment tests of the milk or cream and the farm inspection records for the individual producers at each dairy plant as frequently as deemed necessary.

(2) Examine the records of the rejected milk or cream and of the excluded producers.

(3) Inspect the milk or cream and the premises of any excluded producer seeking authority to resume sale of his milk or cream and to grant such written authorization if warranted.

(4) Give special attention to the quality records of new producers.

(5) Make "spot-checks" of the producer's premises and of the milk and/or cream received at dairy plants and to compare the results of such investigation with the plant records.

(6) Furnish to the operator of every licensed dairy plant so examined, a dated and signed copy of his report of examination, describing matters requiring correction.

(7) Render advice and assistance to producers in the production of milk and cream of desirable and acceptable quality and render assistance to the plant operator in his territory as to the interpretation of these minimum standards and regulations to prevent the acceptance of insanitary milk and cream as a human food product.

Ag 30.12 Identification of adulterated milk. Whenever any duly authorized law enforcement dairy inspectors examine and test the milk or cream received at or being held by any dairy plant, for the purpose of determining the quality thereof, and they find any of such milk or cream to be adulterated, they shall tag each can of such milk or cream and shall identify the same by adding thereto a harmless (red) food color to prevent its being processed or manufactured for food for man but not destroy its use as food for animals.

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