

SURVEY OF ABNORMAL MILK PROGRAMS ADMINISTERED BY STATE REGULATORY AGENCIES^{1, 2}

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SUMMARY

Through survey questionnaires, information was obtained about the abnormal milk control programs administered by state regulatory agencies. Responses were received from dairy regulatory officials in 49 states. A majority (67%) of the states did not have a designated abnormal milk regulatory program at the time of this survey, but many were in the process of developing such programs. More concern was evident for the control of abnormal milk in the Grade A supply than for the manufacturing supply.

The tests most widely reported for detecting abnormal milk (in order of prominence) were: microscopic leucocyte count, California mastitis test, modified Whiteside test, catalase test, and Wisconsin mastitis test. Standards based on leucocyte counts of 500,000 or 1,000,000/ml were reported by 13 states. Approximately 70% of the responding states indicated that their programs followed the recommendations of the National Mastitis Council; however, others (30%) indicated further studies would be made before abnormal milk regulations could be promulgated.

The new Grade A pasteurized milk ordinance, 1965 Recommendations of the USPHS (3), is scheduled to become effective for all interstate milk shippers July 1967 (1). It is significant that a portion of this ordinance deals specifically with abnormal milk or mastitis control. Furthermore, delegates to the National Conference on Interstate Milk Shipments (1) recommended that laboratory screening programs for abnormal milk be in operation by July 1966. They recommended, however, that such a program should not be used as a prerequisite of interstate milk shippers listing until the adoption of recommendations (3) of the Public Health Service (July 1967).

While the National Mastitis Council (2) has suggested procedures for a flexible abnormal milk control program, such a program is not suitable for regulatory enforcement. Reasonable standards and methods of detection must be established. The desirability of having a uniform regulatory control program among states is obvious. Programs mentioned

by the Public Health Service (3) and the Interstate Milk Shippers Conference (1) are not specific enough to meet this need. For example, the Public Health Service (4) has published information on the use of five different screening tests for the detection of abnormal milk, but recommend these be an adjunct only to the regulatory process (3). There is concern that some agencies will likely overlook this warning and use one or more of the screening tests as basic criteria of abnormal milk. Since none of these tests provides conclusive evidence of abnormal (mastitic) milk, confusion between states could produce chaotic conditions.

To obtain information on the types of abnormal milk control programs being conducted or planned by the regulatory agencies in each state, a survey was conducted by questionnaire. The findings of this survey are presented in this paper.

SURVEY FINDINGS AND DISCUSSION

Questionnaires were sent (Fall, 1965) to regulatory agencies responsible for the milk regulatory program in each of the 50 states. Of the 49 responses received, 27 (55%) were from state departments of health, 21 (43%) were from state departments of agriculture, and 1 (2%) was from a state sanitary livestock board.

Table 1 shows a tabulation of the responses from state agencies concerning their abnormal milk control programs. A majority (67%) of the states did not have a specific abnormal milk control program at the time of the survey. Some indicated their programs had been initiated during recent months, while others reported theirs had been in effect for several years. Several states indicated that programs were being planned. Many of the states (57%) stated that they had a definition for abnormal milk, and a majority (74%) of the states indicated that their definition was the same as that of the Public Health Service (3). Approximately one-half (52%) of the states responding stated that they presently did not have specific procedures for enforcing an abnormal milk control program, and a majority (68%) revealed that

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TABLE 1. RESPONSES OF STATE REGULATORY AGENCIES TO SPECIFIC QUESTIONS ABOUT THEIR ABNORMAL MILK CONTROL PROGRAMS

Question	No. of states responding ^a	% of states responding	
		Yes	No
Does the state have:			
A current abnormal milk regulatory program?	49	33	67
A definition of abnormal milk?	35	57	43
The same definition of abnormal milk as the USPHS code?	31	74	26
Specific procedures for enforcement of such a program?	31	48	52
A standard for Leucocyte count?	28	32	68
Is the program concerned with:			
Grade A milk only?	30	67	33
Milk for manufacturing only?	24	0	100
Both Grade A milk and milk for manufacturing?	30	33	67

^aAll questions were not answered by all states.

they did not have an established standard. Many of the states indicated that their program was of an educational nature and that participation was voluntary. While 67% of the states responding reported that their program was concerned with the Grade A supply only, none of the states stated that their program dealt only with milk for manufacturing. Only about a third (33%) indicated that their program was concerned with both grades of milk.

Table 2 shows the testing procedures used by the state regulatory agencies for detecting abnormal milk. Only 27 of the states provided information concerning screening tests employed. The microscopic leucocyte count was the most widely mentioned test, followed closely by the California mastitis test. It is significant that state agencies used all of the tests on which the Public Health Service (4) has published information. Nineteen (70%) states indicated that more than one of these tests were used. The most frequent combination was the microscopic leucocyte count and the California mastitis test. A few states reported the use of physical examination by a veterinarian and the use of a strip-cup.

The use of a standard based on a leucocyte count of 500,000/ml was reported by five states, while

eight reported the use of a leucocyte count of 1,000,000/ml as a standard. One respondent, who reported using the higher standard, stated that this standard was tentative and indicated that it would be lowered to 500,000/ml. Fourteen states declared that they were conducting or planning studies to obtain information to serve as a basis for establishing standards for abnormal milk. Fifteen states indicated they were conducting or planning investigations relating to conditions and prevalence of mastitis. Nineteen states reported that they have conducted tests for abnormal milk on individual producer samples, while one state indicated that tests had been conducted on commingled samples (350 samples). The number of samples tested by individual states during the past year ranged from 50 to 775,656. The total number of samples tested by 11 states which reported this information was 972,401. The percentage of samples in violation of standards reported by individual states ranged from <1 to 40% for Grade A milk and from <2 to 65% for manufacturing milk.

The survey findings reported here indicate considerable differences in the types of abnormal milk control programs in effect or planned by state regulatory agencies. Such differences could cause many problems in the initiation and enforcement of an effective regulatory program and could be particularly disturbing to plants involved with interstate milk shipments. Although a majority of the responses received from the states indicated that recommendations of the National Mastitis Council (1) are being followed, more specific recommendations must be advanced if a consistent program between states is to be realized. Items of major differences appear to be the selection and use of screening tests and establishment of standards.

TABLE 2. SCREENING TESTS EMPLOYED BY STATE REGULATORY AGENCIES FOR THE DETECTION OF ABNORMAL MILK

Test	States Using Test	
	No. of States	% of States Responding ^a
Microscopic leucocyte count	21	80
California mastitis test	18	67
Catalase test	9	33
Modified Whiteside test	9	33
Wisconsin mastitis test	5	19
Other (includes strip cup, physical examination, and veterinary diagnosis)	6	22
Combination of tests	19	70

^aA total of 27 states responded to the question about the screening test used for detecting abnormal milk.

ACKNOWLEDGEMENT

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REFERENCES

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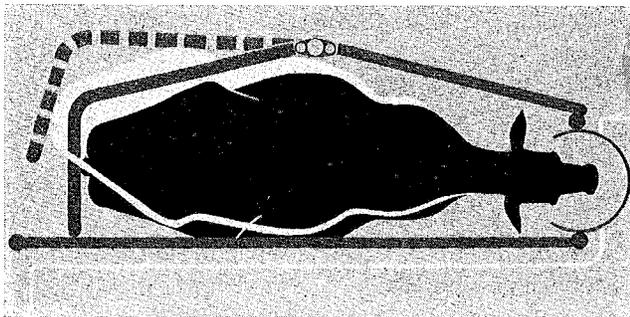
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3. U. S. Department Health, Education and Welfare. Grade A Pasteurized Milk Ordinance—1965 Recommendations of the Public Health Service. Public Health Service Publication No. 229. Washington, D. C.

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INFORMATION FROM INDUSTRY

Editorial Note: Following are items of information on products, equipment, processes and literature based on current news releases from industry. When writing for detailed information, mention the Journal.

**MILKING STALL ADJUSTS TO
DIFFERENT SIZE COWS**


Dairy farm equipment designers have come up with an answer to the milking parlor operator's problem of how to handle cows of all different sizes. Although some localized attempts have been made in building adjustable stalls, the first available on a nationwide basis is the new SURGE Diagonal "Cow Control" Stall with instant operator control of the rear gate position.

By means of a special ratchet-type locking device, the operator can confine either a big Holstein or a small Jersey in best milking position by crowding her not only forward, but toward the machine operator. Additional features of the newest Surge milking stall are a circular stainless steel feed box and shield, and an acrylic-epoxy painted finish to withstand wear and moisture. Improved operator safety features include tubing with rounded corners and vertical operating lever positions. The stall is also adaptable for manual feeding or electronically controlled automatic feeding.

This new milking stall, designed and built by Babson Bros. Co., is being made available through all Surge Service Dealers in the U. S., Canada and South American countries.

**AUTOMATIC FLOW DIVERSION
VALVE CLEANED-IN-PLACE**

A new automatic flow diversion valve unit, offered by Tri-Clover Division of the Ladish Company, is designed to direct the flow in accordance with the temperature setting of the thermo controller of the HTST system. The valve unit is built so that a "leak-detector" port is automatically flushed before pasteurization system goes into forward flow. Valve is air-actuated.

Several advantages of the system are cited by the manufacturer. The unit has full CIP capability and there is no need to dismantle valve during cleaning operations on the HTST press and holding tube. As a fail-safe feature, air or electric power failure will automatically divert product into balance tank. The unit is designed to operate with existing HTST Thermo/Controllers and is available in sizes to handle any existing HTST flow requirements. Testing can be accomplished without complete disassembly of the valve.

Write for Bulletin FD164A: LADISH CO., Tri-Clover Division, Kenosha, Wisconsin.

**PORTABLE WATER-POWERED
PUMP PROPORTIONS LIQUID**

Users of hypochlorite solutions and other chemical sanitizers can now dispense these materials more economically and quickly with a new pump that can easily be attached directly into a water line. Offered by Pennsalt Chemicals Corp., the Imperial Proportioner Pump, a four-pound portable unit, requires only water for power and measures approximately 11 x 7 x 12 inches. It requires no adjustment for changes in water pressure from 5 to 85 psi, resulting in excellent accuracy. It can be used with cold water or hot (maximum 180 F.) water lines.

The Proportioner also has a wide selection of concentration ranges that will permit a minimum of 1/12 ounce of stock solution per gallon of water to a maximum 3 ounces per gallon to be automatically dispensed at a rate of up to 6 gallons per minute or 360 gallons per hour. It is highly accurate without changing proportioner settings at any water pressure. A rugged integral unit with few moving parts, it requires little cleaning or maintenance attention. Further information can be obtained from the B-K Department, Pennsalt Chemicals Corp., 3 Penn Center, Philadelphia, Pa. 19102.