

*Cost to add agent or alter process to inhibit Listeria growth in the final product.* One of the major impacts of the rule is that it encourages establishments in EG 4 to move into EG 2 by adding an agent or altering their production processes to inhibit *Lm* growth in the product. Adding such treatments would eliminate the need for more frequent verification testing. It is expected that 25

percent of the large and small establishments in EG 4 will move to EG 2 by doing so—3 large and 77 small establishments. The costs associated with this impact are subject to several factors. They include each establishment's unique situation with respect to product type, facility size, and equipment. Assuming that the cost to add agents or alter a process includes a one-time cost of

installing equipment to add agents or alter production processes of \$150,000 for a large, \$125,000 for a small, and \$100,000 for a very small establishment, the initial treatment cost totals \$10.1 million. Using an operating cost of 10 percent of the initial cost produces a corresponding annual outlay of about \$1 million (Table 15).

Table 15. Costs for *Lm* growth inhibiting treatments or processes, initial and annual operating.

Item	HACCP Establishment Size Category			Total
	L	S	VS	
	\$thousand			
Initial cost per establishment	150.0	125.0	100.0	
Number of Establishments				
Establishments in EG 4 moving to EG 2	3	77	0	80
	\$thousand			
Initial cost	474.3	9,634.2	0	10,108.5
Annual operating costs	47.4	963.4	0	1,010.9
Total costs	521.7	10,597.6	0	11,119.4

*Cost of FCS testing for Listeria species.* As with the third impact discussed above, the testing provisions of the rule encourage establishments to move from EG 4 into EG 1 and EG 2 (Table 16). These establishments are expected to be mostly small establishments attempting to avoid frequent FCS verification testing requirements for EG 4 establishments and the potential exposure to holding product upon two consecutive positive FCS verification test results. Almost half of the large establishments that were previously in EG 4 are expected to migrate either to EG 1 or to EG 2.

The costs of testing for the remaining 2,518 establishments in EG 3 and EG 4 are based

on several assumptions. They include: the actual level of FCS verification testing being conducted at the present time, the percentage of establishments conducting this level of verification testing, the number of production lines by establishment size, and the costs of testing. The assumptions used in this analysis are supported by observations by FSIS inspection personnel and by various recent surveys conducted by FSIS and the industry. For example, in the recent FSIS hotdog and deli-meat survey, about 20 percent of large, 26 percent of small, and about 5 percent of very small establishments stated that they conducted FCS verification testing for *Listeria* spp. The *Lm* growth

inhibiting processes and ingredients used in producing these products probably lowers the level of verification testing being conducted by establishments producing other RTE MPPs. Therefore, FSIS believes that the actual proportion of establishments in EG 3 and EG 4 that conduct FCS tests is probably double the proportions reported in the recent hotdog and deli-meat survey for the small and very small establishments. That is, FSIS assumes that the current FCS verification testing levels for large, small, and very small RTE MPP producing establishments are 100 percent, 50 percent, and 10 percent, respectively (See middle rows in Table 17).

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