Improvements for Poultry Slaughter Inspection

Appendix G – Other Consumer Protection Performance Standards

APPENDIX G – OTHER CONSUMER PROTECTION PERFORMANCE STANDARDS

Other Consumer Protection Performance Standards that the Food Safety and Inspection Service (FSIS) is considering to propose include Removable Non-toxemic/Non-septicemic Animal Disease and Standards of Identity (dressing and quality defects). These performance standards are coined Other Consumer Protection (OCP), because they do not cause a food to be unsafe for human consumption, but they do adulterate products.[1] Consistent with the FSIS fundamental shift in regulatory philosophy and strategy, the Agency is adopting and implementing performance standards that establish a required level or measure of performance, but does not specify the means for achieving them. FSIS believes that in most cases, establishments can best produce unadulterated products through compliance with carefully developed, science-based performance standards. Reliance on these standards provides industry with flexibility it needs to both devise the means of achieving or surpassing that standard and to update establishment systems with new technology as it becomes available.

Scientific Data Basis for Developing Performance Standard

The performance standards under consideration reflect FSIS experiences with establishments under the Hazard Analysis and Critical Control Points (HACCP) Inspection Models Project (HIMP). The HIMP performance standards included OCP 1 through OCP 5.[2] For 16 young chicken slaughter establishments participating in the project, baseline data from which the OCP performance standards were developed was collected by the Research Triangle Institute (RTI), a third-party think tank and independent consulting firm. The RTI scored 2,000 carcasses for a variety of organoleptic defects over a 5-week period (see **Table E-1**). Over a 5-week period, 300 microbial samples were collected and analyzed for *Salmonella* and generic *Escherichia coli* (*E. coli)* in each plant. The data was collected from birds selected randomly at the end of the line and examined for both disease and dressing and quality defects by RTI veterinarians. Each dressing defect observed was counted as 1 defect, and pathology was classified as localized or generalized. From this data FSIS developed and published performance standards on November 2, 2000, for young chickens (and other species). The performance standards specific

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[1] *FSIS scientists analyzed disease and conditions of poultry for their public health significance in July 1998 (FSIS Website: July 22, 1998. HIMP: Disease and Conditions observable in Meat and Poultry.) Two general postmortem categories were identified as food safety related: Infectious and Contamination.*

Food-safety-related infectious conditions and contamination are identified organoleptically, that is by using the senses, and are presumed to contain infectious agents (bacteria, virus, rickettsia, fungus, protozoa, or helminthes organisms) that may cause a food to be unsafe for human consumption and that are likely to be transmitted through meat and poultry. For example, in poultry, septicemia toxemia and air sacculitis with systemic change are identified as food safety hazards. Diseases not identified as food safety hazards are identified as affecting consumer protection because they adulterate products. These diseases and conditions contain infectious agents that do not render foods unsafe to humans or are unlikely to be transmitted to humans. One example is inflammatory process in poultry. Diseases affecting consumer protection, along with dressing and quality defects, such as pinfeathers, oil glands, esophagus, etc., are considered OCP.

[2] *Explain OCP 1 – 5 categories.*

for plants participating in the project provided a scientifically valid measure by which changes in food safety and other consumer protection data can be assessed.

Table E-1. Estimating the Margin of Error with 95 Percent Confidence for a Given Percentage Error in Organoleptic Defects by Sample Size

Percent Error	*Sample Size*		
	1,000	*2,000*	*3,000*
0.5	0.49	0.33	0.27
1.0	0.67	0.46	0.37
2.0	0.92	0.64	0.52
3.0	1.11	0.77	0.63
4.0	1.26	0.88	0.72
5.0	1.40	0.98	0.80

For a sample size of 2,000, if 2 percent of the sampled carcasses have an organoleptic defect, then the estimate of percentage of defects would have a margin of error with 95 percent confidence of approximately $\pm$ 0.64 percent.

Subsequently, 20 young chicken plants joined the project. From these 20 plants, FSIS verification data was collected through electronic means from July 14, 2003, until December 31, 2004. These results from the hands-on verification tasks that FSIS off-line inspectors performed showed that establishments improved in meeting the performance standards (see **Table E-2**). For example, OCP-1, Removable Animal Disease for the HIMP, was set at 1.7 percent. The FSIS verification data for OCP-1 was 1.0 percent, a .7 percent improvement.

Table E-2. Performance Standards – Removable Animal Disease and Standards of Identity

Category	*HIMP Verification Standard**	*HIMP Performance Standard*
Animal Disease (AD) (air sacculitis, arthritis, ascites, avian leukosis complex, avian tuberculosis, cadaver, enteritis, erysipelas, inflammatory process, generalized keratoacanthomas, nephritis, osteomyelitis, tumors [carcinoma, sarcoma, etc.], pericarditis, salpingitis, tenosynovitis)	1.0%	1.7% (OCP-1)
Standard of Identity (SoI-1) (breast blister, bruises, external multilation, fractures, overscald, scabs, trimmable keratoacanthomas, localized inflammatory process)	39.2%	52.5% (OCP-2)
Standard of Identity (SoI-2) (extraneous material, feathers, lung, oil gland, trachea, bile)	76.0%	80.0% (OCP-4)
Standard of Identity (SoI-3) (bursa of fabricus, cloaca, crop, esophagus, intestine)	9.4%	20.8% (OCP-5)

* Based on FSIS verification data from 20 HIMP plants (7/14/03 – 12/31/04).

With regard to potential improvements in poultry slaughter inspection, FSIS is considering proposing that establishments meet the more stringent 1.0 percent performance standard for Removable Non-septicemic/Non-toxemic Animal Disease. These diseases and conditions are the same as for HIMP OCP-1 (see Table E-2).

FSIS is also proposing standards of identity regulations for all ready-to-cook poultry, whether it be sold as whole birds, as parts, or as product that is comminuted or otherwise further processed. Consistent with the definition of ready-to-cook poultry in 9 *Code of Federal Regulations*

(CFR) 381.1, FSIS is considering proposing standards of identity regulations that would require that poultry products be essentially free of the following three categories of defects at post-chill:

SoI-1 Miscellaneous Defects: pinfeathers and vestigial feathers (hair or down), breast blisters, bruises, external mutilation, fractures, over scald, scabs, trimmable keratoacanthomas, and localized inflammatory process

SoI-2 Dressing Defects: extraneous material, lung oil gland, trachea, and bile

SoI-3 Digestive Tract Tissue Defects: bursa of fabricus, cloacas, crop, esophagus, and intestines

FSIS is proposing a standard of identity that would limit the level of trim and processing defects on poultry products at post-chill, rather than pre-chill because post-chill conditions better reflect the product that consumers will purchase or consume. Also, most cutting up of poultry carcasses is performed after the chiller, therefore, FSIS believes that it is more appropriate to establish standards of identity that would apply after establishments have trimmed poultry carcasses at post-chill.

The data for standards of identity is based on the FSIS verification data from OCP-2, OCP-4, and OCP-5 in HIMP. OCP-2 corresponds with SoI-1; OCP-3 corresponds with SoI-2; OCP-4 corresponds with SoI-3. (HIMP OCP-4 is for ingesta. Because ingesta in chillers are considered insanitary, a post-chill performance standard for ingesta was not necessary.)

Sample Size Selection for Collecting Organoleptic Data for HIMP Performance Standards

A proposed sample size of 2,000 randomly-selected carcasses at each establishment/site and 2,000 randomly-selected cut-up parts or giblets provided appropriate levels of precision of the expected percentage of error for organoleptic defects during inspection. To achieve this number at each establishment and site within a plant, 10 samples per hour would be selected during an 8-hour shift over a 5-week period (10 per hour × 8 hours × 5 days × 5 weeks = 2,000 samples).