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REGULATORY IMPACT STATEMENT: YOUNG CHICKEN
SLAUGHTER INSPECTION RATE MAXIMUMS

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July 1979

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REGULATORY IMPACT STATEMENT: YOUNG CHICKEN SLAUGHTER INSPECTION RATE
AXIMUMS. By Clark R. Burbee and Elwin Guild; National Economics Division;
Economics, Statistics, and Cooperatives Service; U.S. Department of
Agriculture; Washington, D.C. 20250; July 1979

ABSTRACT

The economic impacts of a proposed result to standardize the maximum linespeeds for the inspection of young chickens were assessed. Eight options were evaluated to determine the one that would have the least burden on plants in the industry and the Food Safety and Quality Service (FSQS). Impacts analyzed included those on Federal inspector employment and costs, plant linespeeds and labor productivity and costs, plant employment, length of work week, and processing capacity. This impact statement was prepared for Food Safety and Quality Service as part of the regulatory review requirements.

Keyword: Inspection rate, broilers, impacts, options.

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REGULATORY IMPACT STATEMENT: YOUNG CHICKEN
SLAUGHTER INSPECTION RATE MAXIMUMS

INTRODUCTION

Early in 1979, the Food Safety and Quality Service (FSQS) requested the Economics, Statistics and Cooperatives Service (ESCS) to conduct economic analyses of several proposed regulatory changes. These proposals were intended to change procedures used to carryout provisions of the Meat and Poultry Inspection Acts. Before adoption of rule changes, Executive Order 12044, dated March 23, 1978, directs each agency to adopt procedures to prevent regulations from imposing unnecessary burdens on the economy, individuals, public or private organizations or State or local governments. This requires an analysis to judge the effects of the present regulation, costs and benefits of the proposed changes and identification and determination of the costs and benefits of any viable alternatives.

Food Safety and Quality Service is the Federal agency responsible for providing meat and poultry inspection services. For a number of years, it was the policy to establish standards for the maximum speed allowed to operate processing lines and inspect young chickens or broilers in poultry processing plants. Overtime, these standards become subject to different interpretations. This resulted in plants with the same technical line configurations, but located in different FSQS administrative regions, to operate at different maximum linespeed and inspection rates. Because of this inequity, litigation was initiated to resolve this problem.

This report presents the results of the economic analysis made to evaluate the situation and possible alternatives. It is presented in the form generally used for regulatory impact statements.

*The authors are respectively agricultural economist with the National Economics Division, ESCS, and formerly staff economist, FSQS, USDA.

Final Impact Statement

1. Title: Young Chicken Slaughter Inspection Rate Maximums
2. a) Nature of Action and Groups Impacted:
This action establishes maximum young chicken slaughter inspection rates, in terms of birds per inspector per minute, for various young chicken slaughter line configurations. These rates replace those contained in previously issued informal guidelines and provide for a uniform national inspection rate policy.
Groups impacted by this action include all segments of the poultry industry, and the Food Safety and Quality Service.
- b) Reason for Selection of Option Chosen:
Maximum young chicken slaughter rates in effect in the Southwest Region, plus five percent, was the option selected because:
 1. It was recommended by the Administrator's Inspection Rate Study Group (see section 4 below);
 2. It provides for a potential gain of 1.9 percent in national broiler output;
 3. Implementation requires minimal capital outlay by industry for plant facility modification;
 4. It results in no lessening of consumer protection; and
 5. Improves inspection productivity.
3. Purpose and Need for the Action:
The Poultry Products Inspection Act (21 U.S.C. 451 *et seq.*), among other things, requires the Secretary of Agriculture to cause to be made by inspectors a post-mortem examination of the carcass of each bird processed in each official establishment subject to inspection under the Act. The inspection is essentially one of having an inspector examine by observation and palpation the exterior, the interior of the body cavity, and the exposed viscera of each bird slaughtered. In carrying out this inspection, poultry slaughter line inspectors follow a standardized procedure designed to assure that only wholesome poultry carcasses and parts are passed for human food.

Standard times needed to perform the procedure for inspecting young chickens have been established. These standards vary with the configuration of the processing line and the number of inspector stations. For the most prevalent combinations of these variables, maximum inspection rates were provided in informal guidelines and made available to the poultry industry and field inspection personnel. However, due to varying interpretations of the guidelines, different inspection rates have been permitted. Questions concerning these inspection rate differences for young chicken slaughter operations have been raised by various segments of the poultry industry and have been the substance of recent litigation.

4. a) Options Considered:

In an effort to apply inspection procedures and practices uniformly and preclude inconsistencies in interpretation of maximum inspection rates, a study group of inspection officials was convened by the Administrator to determine the current application of inspection rates and to recommend an approximate national young chicken slaughter inspection rate maximum from among available options. The options included:

Option 1 : Status Quo--rejected because it would maintain different treatment of establishments between regions, and within areas and circuits in violation of court order.

Option 2 : Enforce 1974 Poultry Slaughter Inspection Time Standards-- rejected because implementation would require a 12 percent increase in all young chicken processing plant operating hours to maintain output at current levels.

Option 3 : Implement 1977 Draft Bulletin on Staffing Standards-- rejected because it would require a significant increase in inspection personnel and would require a two percent increase in all processing plant operating hours to maintain output at current levels.

Option 4 : Establish an Internal Maximum Inspection Rate Equal to the 1974 Standards Plus 25 Percent--rejected because a permanent solution is required and inspector incentives would be needed for the additional workload.

Option 5 : Establish New 1978 Standards--rejected because it would require a 1.8 percent increase in all processing plant operating hours to maintain output at current levels.

Option 6 : Implement 1978 Standards with an Arbitrary Increase to Compensate for Increased Output--rejected because it would be a temporary solution requiring increased productivity per inspector without any additional incentive.

Option 7 : Adopt 1978 Standards Plus Increases for Added Relief Time--rejected because inspection staffing constraints would result in discriminatory treatment of small plants due to the lack of relief inspectors.

Option 8 : Establish Inspection Rates Based on Those Enforced in the Southwest Region Plus Five Percent--This option was recommended by the Administrator's study group which concluded that the inspection rates currently in effect in the Southwest Region properly ensure adequacy of inspection. These rates were increased by five percent to reflect the elimination of tibia palpation, which has been found to be no longer necessary in view of the improved health status of today's young chicken flocks. This option has the potential for increasing young chicken processing plant efficiency by reducing total plant operating hours by nearly two percent to maintain the current output level.

b) Comparison of Southwest Region Plus Five Percent With Present Situation:

1. USDA and Other Federal Costs

The impact of this action upon USDA costs is dependent upon whether the changes in slaughter inspection rates affect the current number of processing lines used to slaughter and eviscerate young chickens. Currently 195 plants operate 622 processing lines to slaughter an estimated 3.801 billion young chickens in 1979.

This action could result in a net reduction of 12 young chicken processing lines nationally. The reduction in lines could occur in plants located in the Southwestern and Southeastern regions where increased inspection rates, as a result of this action, would effectively increase plant capacity. In other regions, this action would generally lower current inspection rates, and may require many plants to either operate longer hours or add more processing lines to maintain current output levels.

Currently, 1,883 inspectors are required to man the 622 processing lines operating. This action could reduce that requirements by a maximum of 37 inspectors. At \$14,300 a year salary, the potential annual cost impact on USDA is a reduction of \$529,100.

Because of anticipated growth in the production of young chickens, from 3.8 billion in 1979 to 4.4 billion in 1983, the industry may need to add between 62 and 100 processing lines over the next several years. This could increase the requirements for inspectors furnished by USDA by as many as 300 inspectors. Consequently, this action is expected to result in only a temporary decrease in USDA inspection personnel requirements.

2. Expected Impacts

--On main purpose to which action is addressed and duration.

This action will establish uniform national inspection rates for young chickens that allow sufficient time for inspectors to perform the prescribed post mortem carcass examination. These maximum inspection rates are shown in table 1.

This action will remain in effect for an indefinite period.

--Non-Federal cost impacts.

This action will reduce current processing line speeds in 43 plants operating 135 lines (table 2). Another 122 plants operating 381 lines would have faster line speeds, while the remaining 30 plants with 106 lines would experience no change. Table 3 shows the impact by line configuration and region.

The primary impact of this action is upon labor costs. Plants required to operate lines at slower speeds are likely to incur losses in labor productivity that will increase average cost. Plants able to operate lines faster are likely to realize benefits in the form of increased labor productivity and lower average cost.

The compliance impacts in terms of average processing cost changes are shown by region and number of inspection posts per line in table 4. Average processing costs increase less than one half a percent in the Western, North Central and Northeastern regions except for the 3 inspection post lines in the Western region. The 2.5 percent increase in the Western region assumes that plants will shift to overtime operation to maintain present production.

Average processing costs decrease between a third of a percent to one percent in the Southwest and Southeast regions. Since these two regions account for 75 percent of total young chicken output, industrywide processing costs would be reduced by \$2.9 million a year or an average on 0.027 cents a pound ready-to-cook (RTC). This is equivalent to 0.3 of a percent of the total average processing cost.

--Other significant economic impacts-Employment

This action may increase processing plant employment by 740 persons (1.4 percent). By regions, employment may increase by 480 (3.3 percent) and 410 (1.5 percent) in the Southwest and Southeast regions respectively. Employment reductions of 60 (2.4 percent) and 10 (1 percent) and 80 (0.8 percent) in the Western, North Central and Northeastern regions are possible.

The changes in employment levels are primarily a result of adjustments initiated by the line speed changes. Plants increasing linespeeds, such as many of those in the Southern regions, will need to add employees to such functions as receiving, cut-up and further processing to maintain a higher and continuous flow of product through the plant. Plants reducing line speeds are likely to be able to operate with a smaller number of employees such as many of the plants in the other regions.

--Productivity

Labor productivity for the receiving through evisceration functions of young chicken processing is expected to increase by an average of 5 percent and 2.8 percent in the Southwestern and Southeastern regions respectively. Labor productivity for these same functions could decrease by an average of 5.7 percent in the Western, 1.5 percent in the North Central and 0.1 percent in the Northeastern regions.

The magnitude of the labor productivity changes are significantly smaller when consideration is given to other plant functions such as cut-up and further processing. With these functions considered, labor productivity increases by 1.7 percent in the Southwestern and Southeastern regions and decreases by 1.9 percent in the Western, 0.5 percent in the North Central and 0.1 in the Northeastern regions.

--Work Week

Given the same volume of output, this action may affect the length of the work week. Nationally, the average work week could decrease by three quarters of an hour (2.1 percent) as the result of increased labor productivity and inspection rates. Regionally, the average work week could decrease by 1.9 hours (4.9 percent) in the Southwestern region and 0.9 hours (2.3 percent) in the Southeastern region. For the other regions, the average work week could increase by 1.4 hours (3.7 percent) in the West, 0.6 hours (1.5 percent) in the North Central and 0.4 hours (1.1 percent) in the Northeastern region.

--Utilization of Capacity

On the basis of 2,000 operating hours a year per processing line, this action could decrease the hours of current slaughter utilization by the equivalent of 83 million birds a year or 2 percent. This is the same as adding the capacity of approximately 12 3-inspector processing lines with an investment value of approximately 9 million dollars.

Regionally, 53 million head of slaughter capacity (5.2 percent) is added in the Southwestern region, and 45.9 million head (2.3 percent) in the Southeastern region. Annual capacity reductions of 6.4 million head (3.6 percent) in the Western, 0.8 million head (1.7 percent) in the North Central, and 9.3 million head (1.2 percent) in the Northeastern regions are expected as a result of this action.

This action is not expected to have a significant economic impact on prices, foreign trade, supply, energy and resource use, technology, investment and credit supply.

--Other significant social effects

This action is not expected to have any significant social effects.

--Distribution of effects

The effects of this action are not uniformly distributed among inspection regions. In general, this action will improve the competitive position of most of the plants located in the Southwestern region. About two-thirds of the plants in the Southeastern region and approximately one-third of the plants in each of the other three regions will gain similar benefits. The remaining plants will experience no change or slightly higher operating costs. Consequently, traditional marketing patterns for young chickens are likely to be changed as firms adjust to the cost effects of the new inspection rates.

This action will not have a major impact upon the comparative advantage of any region. However, the Southwestern region, which already enjoys an advantage in terms of production and processing costs, could experience a slight improvement in its competitive position. This could increase competition between firms in the Western and Southwestern regions that compete for sales in the Western market. Likewise, Northeastern firms competing in local markets against firms located in the Southeast may experience more competition as a result of cost benefits realized by many of the Southeastern plants.

Table 1--Proposed maximum inspection rates for young chickens

Line configuration ^{1/}	Inspection post	Birds/min/post	Birds/min/line
6-1	1	25	25
12-1	2	23	46
12-2	2	21	42
18-1	3	19	57
18-2	3	19	57
18-3	3	18	54
24-1	4	16.5	66
24-2	4	16	64
24-4	4	15.5	62

^{1/} Where first number is the distance in inches between shackle centers presented to the inspection station and the second indicates the number of birds viewed by inspector for each one inspected, e.g., 18-3 indicates that there are 18 inches between the carcasses required to be inspected at a given inspection station and the inspector selects every third carcass from the line.

Table 2--Impact of maximum line speed regulation on plants, lines and young chicken capacity, by region

REGION	PLANTS				LINES				Capacity Percent Change
	Gain	Loss	No Change	Total	Gain	Loss	No Change	Total	
NORTHEAST	13	15	7	35	30	54	30	114	-1.1
PERCENT	(37)	(43)	(20)		(27)	(47)	(25)		
SOUTHEAST	58	15	17	90	190	49	62	301	+2.0
PERCENT	(64)	(17)	(19)		(63)	(16)	(21)		
SOUTHWEST	45	3	2	50	153	8	8	169	+4.8
PERCENT	(90)	(6)	(4)		(91)	(5)	(5)		
WEST	4	8	3	15	5	20	4	29	-3.2
PERCENT	(27)	(53)	(20)		(17)	(69)	(14)		
NORTH CENTRAL	2	2	1	5	3	4	2	9	-1.1
PERCENT	(40)	(40)	(20)		(33)	(44)	(22)		
TOTAL	122	43	30	195	381	135	106	622	+1.9
PERCENT	(63)	(22)	(15)	(100)	(61)	(22)	(17)	(100)	

Table 3--Impact of maximum line speed proposal by line configuration and region

REGION:	N. CENTRAL		N. EAST		S. EAST		S. WEST		WEST		TOTAL	
	Line Config-	Gain Loss No. + - Chg.										
6-1	1		1		1		4	2	1	9	0	1
12-1			1	12	25	2	9	24	6	1	4	2
12-2		2	5	8	17	10	4	24	3			
18-1	2	2	4	5	50	2	3	46		13		
18-1&2			4	5	17	2		3		2		
18-3			6	29	7	8	10	23	13	3		
24-1			7	2	5	46	6	26			27	42
24-2			2	6	8	8	8	17	4	2	1	1
24-4					18	15	9	2			27	17
TOTAL	3	4	2	30	54	30	190	49	62	153	8	8
PERCENT	33	44	22	27	47	26	63	16	21	91	-5	5
										17	69	14
										61	22	17

*Where first number is the distance in inches between shackle centers presented to the inspection station and the second indicates the number of birds viewed by inspector for each one inspected, e.g., 18-3 indicates that there are 18 inches between the carcasses required to be inspected at a given inspection station and the inspector selects every third carcass from the line.

Table 4--Cost changes for inspection rate compliance by region and inspection posts per line

Inspection posts per line	Region					
	West	S. West	N. C.	S. East	N. East	U.S.
2 Person						
Cents/pound	+0.035	-0.087	0	-0.049	-0.022	-0.054
Percent	+0.33	-0.98	0	-0.52	-0.22	-0.58
3 Person						
Cents/pound	+0.241	-0.076	+0.027	-0.041	-0.019	-0.023
Percent	+2.50	-0.93	+0.31	-0.47	-0.21	-0.26
4 Person						
Cents/pound	0	-0.062	--	-0.03	+0.03	-0.027
Percent	0	-0.78	--	-0.36	+0.34	-0.32
All						
Cents/pound	--	--	--	--	--	-0.027
Percent						-0.31



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