



## **California Department of Food and Agriculture**

Meat, Poultry and Egg Safety Branch

Shell Egg Food Safety Proposed Regulations

30-Day Notice of Modified Text and Documents Added to the Rulemaking File

The Department of Food and Agriculture (Department) is proposing to amend proposed new section 1350 of Title 3 of the California Code of Regulations, regarding the implementation of a shell egg food safety program. The Department is also adding the following documents to its official rulemaking file in accordance with the enclosed notice.

- Revised Economic Impact Assessment
- Revised Economic and Fiscal Impact Statement (STD. 399)
- *Economic Aspects of Alternative California Egg Production Systems*, by Hoy Carman, Professor Emeritus, Department of Agricultural & Resource Economics, University of California, Davis, dated August 30, 2012, which was presented to the Department at the October 15, 2012 regulatory hearing as "Exhibit 2".
- *Economic Effects of Proposed Restrictions on Egg-laying Hen Housing in California*, dated July 2008, University of California Agricultural Issues Center, Daniel A. Sumner, J. Thomas Rosen-Molina, William A. Matthews, Joy A. Mench and Kurt R. Richter  
[[http://aic.ucdavis.edu/publications/eggs/egg\\_initiative.htm](http://aic.ucdavis.edu/publications/eggs/egg_initiative.htm)].

The Department is enclosing the modified text, Revised Economic Impact Assessment, and Revised Economic and Fiscal Impact Statement (STD. 399) with this notice. However, due to the large size of the reference materials, the Department will make those materials available on its Internet website indicated below. Any person may also contact the Department to view the documents added to the rulemaking file in accordance with the instructions contained in the enclosed notice.

The regulatory materials related to this proposal can be found at the Department's Internet web site: [www.cdfa.ca.gov/ahfss/regulations.html](http://www.cdfa.ca.gov/ahfss/regulations.html)

**Dated: January 22, 2013**

## TITLE 3. FOOD AND AGRICULTURE

### SHELL EGG FOOD SAFETY

#### 30-DAY NOTICE OF POST-HEARING MODIFICATIONS TO THE REGULATION TEXT NOTICE OF DOCUMENTS ADDED TO THE RULEMAKING FILE

**NOTICE IS HEREBY GIVEN** of proposed modifications to the originally proposed text for section 1350 of Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations. The proposal pertains to the action described in the Informative Digest published in the California Regulatory Notice Register on July 6, 2012 [Notice File No. Z2012-0626-03, Register 2012, No. 27-Z] relating to persons registered with the Department of Food and Agriculture (Department) as an egg producer or egg handler, and any out-of state egg producer or egg handler registered with the Department to sell eggs in California. The Department is now providing notice of additional proposed modifications to the regulation text to change the initial effective date. A copy of the modified text is enclosed.

**NOTICE IS HEREBY GIVEN** of the following documents added to the rulemaking file pursuant to Government Code sections 11346.8(d), 11346.9(a)(1) and 11347.1:

- Revised Economic Impact Assessment
- Revised Economic and Fiscal Impact Statement (STD. 399)
- *Economic Aspects of Alternative California Egg Production Systems*, by Hoy Carman, Professor Emeritus, Department of Agricultural & Resource Economics, University of California, Davis, dated August 30, 2012, which was presented to the Department at the October 15, 2012 regulatory hearing as "Exhibit 2".
- *Economic Effects of Proposed Restrictions on Egg-laying Hen Housing in California*, dated July 2008, University of California Agricultural Issues Center, Daniel A. Sumner, J. Thomas Rosen-Molina, William A. Matthews, Joy A. Mench and Kurt R. Richter [[http://aic.ucdavis.edu/publications/eggs/egg\\_initiative.htm](http://aic.ucdavis.edu/publications/eggs/egg_initiative.htm)].

The documents pertain to the regulatory action as described above [California Regulatory Notice Register, July 6, 2012, Notice File No. Z2012-0626-03, Register 2012, No. 27-Z]. The documents added to this proposal are in response to some of the comments received from the public during the publicly noticed comment periods and at the regulatory hearings held by the Department on October 4, 2012 and October 15, 2012. The public comments pertained [in part] to the economic impact of the enclosure size requirement for egg-laying hens as specified in proposed new regulation section 1350 of Title 3, California Code of Regulations. The documents provide an estimate of the economic implications of adopting alternative caging systems for egg-laying hens. The documents are available for public inspection at the Department of Food and Agriculture, Meat, Poultry and Egg Safety Branch, located at 2800 Gateway Oaks Drive, Sacramento, California, beginning January 30, 2013 and ending at 5:00 p.m. on March 1, 2013, between the hours of 8:00 a.m. and 5:00 p.m.

#### **Written comments regarding the original proposal:**

Written comments already received for this proposal during its initial 45-day public notification period beginning July 6, 2012 and ending at 5:00 p.m. August 20, 2012, the additional 15-day public comment period beginning September 1, 2012 and ending at 5:00 p.m. September 15, 2012, received the day of the public hearings held on October 4, 2012 in Ontario, California and October 15, 2012 in Sacramento, California, and received during the first 15-day notice of modified text beginning November 5, 2012 and ending at 5:00 p.m., November 20, 2012, will become a part of the Department's official rulemaking file.

**Written comments regarding the modified text and documents added to the rulemaking file:**

If any person wishes to comment on the proposed modifications to the text or documents added to the rulemaking file, the written comment must be submitted to the contact person named in this notice beginning January 30, 2013 ending at 5:00 p.m. on March 1, 2013. The written comments are to be restricted to the recent modifications as shown in the attached regulatory text or to the documents added to the rulemaking file. The Department is not required to respond to comments received in response to this notice on other aspects of the proposed regulation. All written comments previously submitted during the initial public comment period ending August 20, 2012, the additional public comment period ending September 15, 2012, comments received the dates of the public hearings held on October 4, 2012 and October 15, 2012, and comments received during the first 15-day notice of modified text ending November 20, 2012, remain the rulemaking file. All written comments received by 5:00 p.m. on March 1, 2013, which pertain to the indicated changes will be reviewed and responded to by Departmental staff as part of the compilation of the rulemaking file.

**Contact Person:**

Written comments are to be addressed to the following person:

Tony Herrera, Program Supervisor  
Department of Food and Agriculture  
Meat, Poultry and Egg Safety Branch,  
Egg Safety and Quality Management  
1220 N Street, Sacramento, CA 95814  
Email: tony.herrera@cdfa.ca.gov

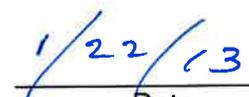
The backup contact person is:

Nancy Grillo, Regulation Coordinator  
Department of Food and Agriculture  
Animal Health and Food Safety Services  
1220 N Street, Sacramento, CA 95814  
Email: nancy.grillo@cdfa.ca.gov

**Materials relating to this proposal may be found at:**

<http://www.cdfa.ca.gov/ahfss/regulations.html>

  
\_\_\_\_\_  
Tony Herrera, Program Supervisor

  
\_\_\_\_\_  
Date

**DEPARTMENT OF FOOD AND AGRICULTURE**

Meat, Poultry and Egg Safety Branch

PROPOSED REGULATIONS

**SECOND MODIFIED TEXT**

SHELL EGG FOOD SAFETY

**LEGEND FOR MODIFIED TEXT**

- Single underline is text that was noticed to the public for a 45-day written comment period, which closed on August 20, 2012, and noticed to the public for an additional 15-day written comment period, which closed on September 15, 2012.
- Double underline for added text, and single underline and ~~strikeout~~ for deleted text, was text that was modified for a 15-day comment period which closed on November 20, 2012.
- Second modifications to the text is shown in *italics*, **bold**, and double underline for new text, and ~~strikeout~~ with *italics*, **bold** and double underline for deleted text.

**Written comments must address only the second modified text.**

The Department of Food and Agriculture (Department), Meat, Poultry and Egg Safety Branch, proposed to adopt section 1350 and amend section 1354 of Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations.

The Department made post-hearing modifications to section 1350 of Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations.

The Department is now making further modifications to section 1350(a) of Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations, to read as follows:

Section 1350. Shell Egg Food Safety.

(a) In accordance with Food and Agricultural Code section 27521(a), to assure that healthful and wholesome eggs of known quality are sold in California, commencing ~~January~~ **July** 1, 2013, any egg producer or egg handler as defined in sections 27510 and 27510.1 of the Food and Agricultural Code, shall ensure all flocks with a hatching date after ~~January~~ **July** 1, 2013 comply with the requirements of this section.

(b) Registered egg producers or egg handlers whose shell eggs are processed with a treatment such as pasteurization to ensure safety, shall be exempt from the requirements of this section. A "treatment" or "treated" means a technology or process that achieves at least a 5-log destruction of SE for shell eggs as defined in 21 CFR section 118.3.

~~(b)~~ (c) Registered egg producers or egg handlers with 3,000 or more laying hens whose shell eggs are not processed with a treatment such as pasteurization to ensure safety shall incorporate all of the provisions specified in subsections ~~(b)~~(c)(1), (2), and (3) in their facility operations:

(1) Implement *Salmonella enterica* serotype Enteritidis (SE) prevention measures in accordance with the Food and Drug Administration, Department of Health and Human Services' requirements for the production, storage, and transportation of shell eggs as specified in 21 CFR Part 118.

(2) Implement a SE environmental monitoring program which includes testing for SE in "chick papers," (the papers in which chicks are delivered) and the house environment when the pullets are 14-16 weeks of age, 40-45 weeks of age, 4-6 weeks post-molt, and pre-depopulation; and

(3) Implement and maintain a vaccination program to protect against infection with SE which includes at a minimum two attenuated live vaccinations and one killed or inactivated vaccination, or a demonstrated equivalent SE vaccination program approved by the Department.

(e) (d) Commencing January 1, 2015, no egg handler or egg producer may sell or contract to sell a shelled egg for human consumption in California if it is the product of an egg-laying hen that was confined in an enclosure that fails to comply with the following standards. For purposes of this section, an enclosure means any cage, crate, or other structure used to confine egg-laying hens:

(1) An enclosure containing nine (9) or more egg-laying hens shall provide a minimum of 116 square inches of floor space per bird. Enclosures containing eight (8) or fewer birds shall provide a minimum amount of floor space per bird as follows, using formula  $322 + [(n-1) \times 87.3] / n$ , where "n" equals the number of birds:

<u>Number of Birds</u>	<u>Square Inches Per Bird</u>
<u>1</u>	<u>322</u>
<u>2</u>	<u>205</u>
<u>3</u>	<u>166</u>
<u>4</u>	<u>146</u>
<u>5</u>	<u>135</u>
<u>6</u>	<u>127</u>
<u>7</u>	<u>121</u>
<u>8</u>	<u>117</u>

(2) The enclosure shall provide access to drinking water and feed trough(s) without restriction.

NOTE: Authority cited: Sections 407, 27531 and 27533, Food and Agricultural Code. Reference: Sections 27510, 27510.1, 27518, 27521, 27541 and 27573, Food and Agricultural Code.

**DEPARTMENT OF FOOD AND AGRICULTURE**  
Meat, Poultry and Egg Safety Branch  
**REVISED ECONOMIC IMPACT ASSESSMENT**

**SUBJECT MATTER OF PROPOSED REGULATIONS**

Shell Egg Food Safety

**SECTIONS AFFECTED**

Adopt Section 1350. Shell Egg Food Safety  
Amend Section 1354. Marking Requirements

**SPECIFIC PURPOSE OF EACH ADOPTION, AMENDMENT, OR REPEAL**

The Department of Food and Agriculture (Department) proposes to adopt section 1350, and amend section 1354 of Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations. The purpose of this proposal is to ensure that eggs are produced in a uniform manner to ensure the quality and safety of shell eggs sold for human consumption by reducing the occurrence of *Salmonella enterica* serotype Enteritidis (SE) contamination of shell eggs during egg production.

This proposal would require any person registered with the Department to engage in business in California as an egg producer or egg handler, and any out-of-state egg handler or egg producer selling eggs in California to (1) implement SE reduction measures consistent with state and federal requirements; (2) comply, within a commercially reasonable time frame, with a minimum numeric enclosure requirement for egg-laying hens if the eggs produced from those hens are sold in California; and (3) comply with specified egg container label requirements to include an affirmative label statement on every package of shell eggs that are for sale in California, certifying that those eggs were sold in compliance with these standards.

Existing law, section 27521 of the Food and Agricultural Code, authorizes the Department to assure that healthful and wholesome eggs of known quality are sold in this state; to facilitate the orderly marketing of shell eggs in a uniform manner; and to prevent the marketing of deceptive or mislabeled containers of eggs.

Existing law, section 27531 of the Food and Agricultural Code, authorizes the Department to adopt regulations relating to the preparation for market and marketing of shell eggs as determined to be reasonably necessary to carry out the purposes of Chapter 1, Part 4, Division 12 of the Food and Agricultural Code.

Existing law, section 27533 of the Food and Agricultural Code specifies that regulations adopted pursuant to Chapter 1, Part 4, Division 12 relating to egg shell surveillance inspection shall be consistent with any federal standards or procedures promulgated by the United States Department of Agriculture on that subject.

Existing law, section 27573 of the Food and Agricultural Code established an advisory committee to the Secretary of the Department on all matters pertaining to standards for shell eggs, the quality of shell eggs; recommendations concerning sampling; uniformity of inspection; adjustment of fees for proper administration and enforcement; annual budget for the administration and enforcement of the chapter and all matters pertaining to this chapter or regulations adopted pursuant thereto; and, components of the Egg Quality Assurance Plan, a voluntary food safety program, that are consistent with and promote the purposes of the chapter.

Existing law, section 27637 of the Food and Agricultural Code specifies that it is unlawful for a person to make any false, deceptive, or misleading statements concerning the quality, size, weight, condition, source, origin, or any other matter relating to eggs.

Existing law, section 27541 of the Food and Agricultural Code specifies that any person engaged in business in California as an egg producer or egg handler, or any out-of-state egg handler or egg producer selling eggs into California, shall register with the Department. A producer is defined in section 27510.1 of the Food and Agricultural Code to mean a person engaged in the business of producing eggs from domesticated fowl for human consumption.

In accordance with the above-noted sections of law, the Department has in place existing regulations specifying the requirements for persons marketing eggs in California under Subchapter 3, Chapter 1, Division 3, of Title 3 of the California Code of Regulations.

The Department is proposing amendments to the requirements for the marketing of eggs in California by adopting section 1350 (shell egg food safety) and amending section 1354 (marking requirements) of Subchapter 3, Chapter 1, Division 3 of Title 3 of the California Code of Regulations. The intent of this proposal is to ensure that eggs are produced in a uniform manner to ensure the quality and safety of shell eggs sold for human consumption.

Based on an initial evaluation, the Department does not believe the proposed regulations are inconsistent or incompatible with existing state or federal regulations.

#### **BUSINESS IMPACT:**

The Department has determined that this regulatory proposal will impact the creation of jobs or businesses or the elimination of jobs or existing businesses or the expansion of businesses in California.

The Department has made an initial determination that the proposed regulatory action will have significant statewide adverse economic impact directly affecting California businesses including the ability of California businesses to compete with businesses in other states.

The Department has made an initial determination that this regulatory proposal will impact shell egg producers, handlers, processing plants, producers, and wholesalers should they choose to engage in the practice of marketing eggs in California.

The Department's proposal affects small businesses.

The Department is making these determinations because due to the cost impacts of this proposal, producer may choose to not market their eggs in California.

- ***Businesses Impacted:*** Approximately 1,151 registered egg handlers consisting of 10 processing plants, 608 which are both processing plants and producers, 202 wholesalers, and 331 producers.

This proposal requires two additional environmental tests and a SE vaccination program than what is currently required by the federal Egg Safety Rule [21 CFR Part 118]. The Department is calculating the cost of the provisions of this proposal, not the current cost for businesses to comply with existing state or federal regulations, or the cost to existing businesses that participate in the voluntary California Egg Quality Assurance Program for SE control, or the cost of the space requirements specified in Health and Safety Code sections 25990 and 25991 for egg-laying hens.

***Estimated costs to businesses to comply with the SE prevention measures by July 1, 2013:***

There are approximately 1,279 farms in California that produce eggs, of that total, the majority of the eggs are produced from 150 farms represented by 28 companies. Nationally, there are approximately 5,098 farms and a majority of those eggs produced are from 69 farms. There are approximately 20 million hens in California and 14 million out-of-state producing eggs sold in California. Out-of-state facilities contribute about 40% of all eggs sold in California.

- Testing of chick papers at delivery for about 8,000-30,000 chicks total about \$35 per truck (a farm can receive about 100,000 chicks per delivery)
- The cost for SE control and surveillance is about \$0.12 cents per hen (11 cents for vaccination and one cent for environmental testing)
- Annual costs of SE environmental testing and vaccination are approximately \$1,413,320 for producers

***Costs to businesses to implement the minimum enclosure size requirements for egg-laying hens by January 1, 2015:***

- The implementation date of January 1, 2015 was set to avoid conflict with Health and Safety Code section 25996. The space requirements specified in this proposal were set to be consistent with the EU standard, but do not conflict with Health and Safety Code sections 25990 and 25991. The businesses impacted by the enclosure requirements are: Approximately 1,279 farms in California produce eggs, of that total, the majority of the eggs are produced from 150 farms represented by 28 companies. Nationally, there are approximately 5,098 farms and a majority of those eggs produced are from 69 farms. There are approximately 20 million hens in California and 14 million out-of-state producing eggs sold in California. Out-of-state facilities contribute about 40% of all eggs sold in California. It is estimated that it could cost producers up to \$400 million to comply with the enclosure requirements of this proposal.
- The Department has made an initial determination that there are no adverse economic impacts to businesses to comply with the labeling requirements under section 1354 as amended by this proposal, in regards to adding specified wording or statements to existing labels on all containers of eggs sold in California.
- *Registration costs:* There are existing application and registration fees in statutes or regulations; however, no new registration fees are imposed by this proposal.
- *Paperwork/Reporting:* There are no new reporting requirements under this proposal. The Department is proposing an expanded labeling statement on containers of all eggs sold in California. It is anticipated any costs associated with the labeling requirements would be negligible, as producers are already complying with specified labeling requirements pursuant to existing regulation section 1354, and the implementation date of January 1, 2015 allows for the depletion of current packaging inventories.
- *Record-keeping:* This proposal may incur additional record-keeping requirements due to the expanded labeling requirement on all containers of eggs to ensure compliance with this proposal, as well as records of environmental testing and vaccinations. However, the records are not required to be sent to the Department. The Department would conduct audits and inspections of facilities to ensure compliance with the requirements as specified in this proposal. Any additional record-keeping costs are anticipated to be negligible since record keeping is a standard business practice for persons marketing eggs in California.

### **BENEFIT OF PROPOSED REGULATIONS:**

This proposal benefits the health and welfare of the citizens of California by serving to ensure only healthful and wholesome eggs are marketed to consumers in accordance with Food and Agricultural Code section 27521. The benefits mitigate any potential adverse economic impacts identified in this proposal. SE is among the leading bacterial causes of food borne illness in the United States, and shell eggs are a primary source of human SE infections. California consumers and the egg industry would benefit from this proposal because the Department is charged with the mission of assuring that healthful and wholesome eggs of known quality are sold in this state and to facilitate the orderly marketing of shell eggs in a uniform manner in accordance with Food and Agricultural Code section 27521. Monetary benefits would be the potential reduction of the occurrence of SE in shell eggs which could cost the industry millions in recalling contaminated eggs from the marketplace and could lead to illnesses to the public. Nonmonetary benefits would be consumer confidence that comes from knowing that eggs sold in California meet the nation's highest food safety standards and market stability derived from strong food borne illness prevention measures applied equally to all suppliers into California markets and clear labeling of such products.

### **ECONOMIC IMPACT ASSESSMENT CONCLUSION:**

The Department of Food and Agriculture (Department) has made an initial determination that the proposed regulatory action would have significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. This initial determination is based on the fact that the proposed regulation imposes mandatory requirements on shell egg processing producers, handlers and wholesalers who engage in the business of marketing eggs in California. The total estimated dollar cost of the vaccination and environmental testing provisions of this proposal is \$1,413,320 annually. It is estimated that it could cost producers up to \$400 million to comply with the enclosure requirements of this proposal.

As part of its Economic Impact Assessment, the Department has determined that its proposal will affect the ability of California businesses to compete with other states by making it more costly to produce goods or services and that it will create or eliminate jobs or occupations. The Department's proposal does not impact multiple industries. The Department is making these determinations because due to cost impacts, producers may choose to not market their eggs in California.

### **The following tables and information were relied upon in formulating the economic impact assessments:**

- **Table 1-Environmental Testing and Vaccination Costs**
- **Table 2-Farm Numbers by Characteristics**
- **Table 3-Costs: Vaccination and Testing (Detail)**
- **Table 4 (Cont)-Costs: Vaccination and Testing**
- **Table 5-Costs of SE illnesses**
- **Economic Impact on Alternative Egg Production Systems in California**

**Table 1-Environmental Testing and Vaccination Costs**

	Cost per Hen					Population Size		Annual Cost of Programs					
	Total <sup>1v</sup>	Size Exempt.	FDA Req.	CEQAP Req.	CDFP Proposal	Hens <sup>2v</sup>	52/70 wk adjust.	Total	Size Exempt.	FDA Req.	CEQAP Req.	CDFP Proposal	
CA facilities													
Somewhat small <sup>3v</sup>	\$0.12296	\$0.12296			\$0	129,118	95,916	\$11,794	\$11,794	\$0	\$0	\$0	
Large <sup>2v</sup>													
w/CEQAP	\$0.12296		\$0.02439	\$0.09857	\$0	15,721,883	11,679,113	\$1,436,080	\$0	\$284,884	\$1,151,196	\$0	
w/o CEQAP	\$0.12296		\$0.02439		\$0.09857	5,240,628	3,893,038	\$478,693	\$0	\$94,961	\$0	\$383,732	
OOS													
Facilities <sup>4v</sup>	\$0.12296		\$0.02439		\$0.09857	14,061,086	10,445,378	\$1,284,378	\$0	\$254,790	\$0	\$1,029,588	
						<b>TOTALS</b>	<b>35,162,715</b>	<b>26,113,445</b>	<b>\$3,210,945</b>	<b>\$11,794</b>	<b>\$634,635</b>	<b>\$1,151,196</b>	<b>\$1,413,320</b>

<sup>1v</sup> 1 to 2999 birds

<sup>2v</sup> 3000+ birds

<sup>3v</sup> Assumes OOS (Out-of-State) facilities shipping into California are all 3000+ birds

<sup>4v</sup> The total cost of \$0.12296 for SE control = \$0.11373 for vaccination and \$0.009233 for testing.

It is at the high end of the cost range as it is based on a 10,000 hen facility and Southern California wage rates.

<sup>5v</sup> California numbers are from the US census of agriculture, Assumptions:

(A) CEQAP covers 75% of all large farms

(B) OOS egg imports are 40% of all eggs sold in California, therefore OOS hen numbers are two-thirds of California's total population.

**Table 2- Farm Numbers by Characteristics**

Number of Hens	Number of Farms
1 to 99	889
100+	390
Total	1,279
150 Farms (28 companies) are/were CEQAP members	

Farm Size	2007 Census of Ag		2002 Census of Ag	
	Farms	Hens	Farms	Hens
1 to 49	4,553	61,148	2,856	40,527
50 to 99	265	16,183	176	11,060
100 to 399	159	27,267	105	16,065
400 to 3,199	48	49,040	30	40,932
3,200 to 9,999	4	18,428	3	17,811
10,000 to 19,999	9	130,932	8	96,931
20,000 to 19,999	15	520,200	9	346,050
20,000 to 99,999	8	566,000	13	962,675
100,000 plus	37	19,702,431	44	21,236,253
<b>TOTAL</b>	<b>5,098</b>	<b>21,091,629</b>	<b>3,244</b>	<b>22,768,304</b>
1 to 2,999	5,001	129,118		
3,000 plus	97	20,962,511		
<b>TOTAL</b>	<b>5,098</b>	<b>21,091,629</b>		

**Table 3-Costs: Vaccination and Testing (Detail)**

SE Vaccines		\$0.01764 per bird		\$14.66 NORTH	\$16.01 SOUTH
Age of chicks/pullets	Method of vaccine delivery	Estimated labor time hrs per 1,000 birds		Estimated labor costs per bird	
Day 1	Spray	1		\$0.01468	\$0.01601
5 weeks	Spray	0.6		\$0.00881	\$0.00961
9 weeks	Spray	0.6		\$0.00881	\$0.00961
14 weeks	Injection	3.8		\$0.05579	\$0.06086
<b>SE Testing</b>				birds per truck	
Chick papers	\$35 per truck (8,000 to 30,000 chicks)			8,000	15,000 30,000
Push-out sample				\$0.00438	\$0.00233 \$0.00117
				birds per house	
Cage-free system	\$51.75 per house			10,000	100,000 200,000
Caged system	\$69.00 per house			\$0.00518	\$0.00052 \$0.00026
				\$0.00690	\$0.00069 \$0.00035

	NORTHERN CALIFORNIA (\$14.68/hr)			SOUTHERN CALIFORNIA (\$16.01/hr)		
	birds per house			birds per house		
	10,000	100,000	200,000	10,000	100,000	200,000
SE vaccines (4)	\$0.01764	\$0.01764	\$0.01764	\$0.01764	\$0.01764	\$0.01764
Day 1	\$0.01468	\$0.01468	\$0.01468	\$0.01601	\$0.01601	\$0.01601
5 weeks	\$0.00881	\$0.00881	\$0.00881	\$0.00961	\$0.00961	\$0.00961
9 weeks	\$0.00881	\$0.00881	\$0.00881	\$0.00961	\$0.00961	\$0.00961
14 weeks	\$0.05579	\$0.05579	\$0.05579	\$0.06086	\$0.06086	\$0.06086
birds per truck						
15,000						
chick papers	\$0.00233	\$0.00233	\$0.00233	\$0.00233	\$0.00233	\$0.00233
Push-out sample						
Caged system	\$0.00690	\$0.00069	\$0.00035	\$0.00690	\$0.00069	\$0.00035
Total SE Cost	\$0.11497	\$0.10876	\$0.10841	\$0.12296	\$0.11675	\$0.11641

**Table 4 (Cont.)-Costs: Vaccination and Testing (Detail)**

2009	No. Coast	No. Valley	So. Valley	So. California	2010
\$12.01	\$10.26	\$12.25	\$12.21	\$13.35	\$12.23
\$3.55	\$3.16	\$3.82	\$3.24	\$3.69	\$3.51
\$15.56	\$13.42	\$16.07	\$15.45	\$17.03	\$15.74
	31%	31%	27%	28%	29%
	7.65%	4.90%	7.50%	20.05%	
	\$10.26	\$12.25	\$12.21	\$13.34	
	\$2.06	\$2.46	\$2.45	\$2.67	
	\$12.32	\$14.71	\$14.66	\$16.01	
	North		South		
Wages	\$14.68		\$16.01		

**Table 5-Costs of SE illnesses**

	All		Eggs		Eggs California	
Cases	1,400,000	47%	661,633	100%	12%	79,396
Home Recover			624,912	94%	12%	74,989
MD Visit			33,082	5%	12%	3,970
Hospital			3,308	0.5%	12%	397
Death	415	80%	331	0.05%	12%	40
Cost	\$310,000,000		\$146,504,450		12%	\$17,580,534

## **Economic Impact on Alternative Egg Production Systems in California**

Referencing the study titled "Economic Aspects of Alternative California Egg Production Systems" by Dr. Hoy Carman, Professor Emeritus from the Department of Agricultural and Resource Economics at the University of California, Davis, Carman states that changing to a new egg production system will have significant short and long term economic impacts to the commercial in-state and out-of-state (i.e. out-of-state producers who export table eggs to California) table egg industry. In the short-run, meeting a standard of 116 square inches per laying hen, for example, could easily cost California egg producers \$400 million for new and remodeled buildings and equipment (Carman, 2012). This is based upon an estimate of the new investment required to satisfy the adoption of 116 square inches per bird. This estimate does not include any egg production costs which are summarized in Table 1 below.

The estimated increased costs of production relative to the current 'conventional' cages are 12.48% and 34.80% for colony cages and cage free operations respectively (Table 1).<sup>1</sup> These cost increases are primarily attributed to increased feed per dozen eggs produced (e.g. higher feed conversion ratios), increased labor, and higher building and equipment charges for increased space per hen (Table 1). Due to fluctuation in these input costs coupled with the uneven reliance of each type of production system on different cost parameters (i.e. labor, building and equipment charges), these percentage increases are only considered estimates. However, it is important to recognize that all the reports and papers reviewed by Dr. Carman including his own analysis show that the elimination of the current conventional cages would raise production costs substantially.

### **Explanation of costs<sup>2</sup>:**

#### **I. Increased Feed and pullet costs:**

Estimated costs for eggs produced in conventional battery cage systems are readily available but similar estimates for other production systems including colony cage and cage free systems are not as available (Carman, 2012). Based on previous literature, feed and pullet costs account for 65 to 85 percent of the budgeted total costs of egg production. Therefore, changes in the feed conversion ratio can have significant effects on the cost of production.

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<sup>1</sup> For Dr. Carman's study it was assumed that the primary housing alternatives to the conventional (i.e. battery cage) cage systems for laying hens are colony cages and cage free systems. Because of lack of information, no estimates were made regarding the proportion of layers to be raised in colony versus cage-free systems.

<sup>2</sup> Increased costs associated with the colony production system with 116 square inches per hen result in an estimated reduction in production of 2.45%. This would result in California laying hen numbers decreasing from 19.60 million to about 19.11 million hens. This 'price elasticity' estimate was used in order to calculate the total costs associated with the proposed regulation.

Table 1: Estimated costs of production by major cost components for alternative California egg production systems (adapted from Carman, 2012).

<b>Production System</b>	<b>Conventional</b>	<b>Colony</b>	<b>Cage Free</b>
<b>Space per hen</b>	68 sq. in	116 sq. in	n/a
<b>Cost Component</b>	-----\$/dozen eggs-----		
	--		
<b>Feed</b>	0.489	0.507	0.593
<b>Pullets</b>	0.119	0.119	0.158
<b>Housing &amp; Equip</b>	0.070	0.135	0.119
<b>Labor</b>	0.029	0.045	0.113
<b>Other</b>	0.086	0.086	0.086
<b>Total Costs</b>	0.793	0.892	1.069
<b>% Total Cost Increase</b>	---	12.48	34.80

II. Loss of value due to cages and equipment no longer used: \$34 million dollars:

Because, most likely the present conventional cages cannot be used in California after December 31, 2014 they may have little salvage value. While some producers have indicated that they expect to be able to convert a portion of their existing cages to colony cages, it is difficult to estimate both the proportion of cages suitable for conversion and the conversion costs (Carman, 2012). A sample of California producers have estimated that their accounting basis for cages and equipment soon to be obsolete per Proposition 2 could be on the order of \$1.75 per hen. Therefore, based on the most recent laying hen numbers of 19.6 million, California producers could have useless assets with an accounting basis of over \$34 million on January 1, 2015. This does not include any buildings that cannot be converted or that will no longer be used for egg production (Carman, 2012).

III. Investment in new buildings and equipment: \$385 million dollars:<sup>3</sup>

Even if all existing facilities and equipment could be remodeled to meet Proposition 2 space requirements significant investments in new buildings and equipment will be required. Specifically, increasing space allocations from 68 to 116 square inches per hen will require new space for approximately 7.62 million hens that must be met with new buildings and equipment.

In most situations, conversions of existing facilities are expected to have lower capital costs than a new facility. However, responses from a number of California producers reveal a wide mix of individual strategies ranging from building all new facilities with new equipment to only converting existing cages and equipment in present buildings. Because of this lack of clarity about what producers will do, Dr. Carman came up with the following scenario:

Suppose that half of the existing buildings can be remodeled and that 25% of existing cages can be converted to meet the new requirements.

The estimated cost for all new facilities (building cages and equipment) for 116 square inches per hen is \$22.55 per hen (\$9.75 per hen for building and \$12.80 per hen for cages and equipment) (Table 2). For purposes of estimation we assume that remodeling costs are 50% of new costs. Thus remodeling building plus installing new equipment would have an

<sup>3</sup> These estimates were made assuming only adoption of colony cages that satisfy the 116 square inch requirement.

estimated cost of \$17.68 per hen while remodeling both building and equipment would have an estimated cost of \$11.28 per hen. Because of the increase in space requirement from the present 68 square inches per hen, housing the number of hens need to maintain California producers' share of the California market will require new space for 7.62 million hens. Replacing half of existing buildings with new construction will accommodate 5.745 million hens, for a total of 13.3648 million hens at \$22.55 per hen for a total investment of just over \$301 million. Remodeling costs for buildings with new cages and equipment for 2.8725 million hens is estimated at almost \$51 million while remodeling costs for buildings, cages and equipment for 2.8725 million hens is estimated at over \$32 million. Given the above specifications, providing 116 square inches per hen will require new investment of California egg producers of about \$385 million. Note that environmental enrichments are not included in these estimates.

Table 2: Estimated housing investment (\$ per hen) cost calculations for colony and cage free operations (modified from Carman, 2012).

<b>Housing Investment</b>	<b>Conventional 68 sq. in</b>	<b>Colony 116 sq. in</b>	<b>Cage free</b>
<b>Building \$/hen</b>	6.50	9.75	9.50
<b>Equipment \$/hen</b>	5.60	12.80	10.00
<b>Total \$/hen</b>	12.10	22.55	19.50

IV. Out of state investment in new buildings and equipment: \$208 million

Egg producers in other states who want to continue supplying the California market will face California production requirements with similar per hen investments in facilities and equipment. Summer, et al. (2008) estimated that out-of-state producers supplied about 35 percent of the total shell eggs consumed in California in 2007. To maintain that share after January 1, 2015, out of state producers would have conversion investment costs for cages and equipment equal to about 54 percent of estimated California costs, or an additional \$208 million for colony cages with 116 square inches per hen.

**ECONOMIC AND FISCAL IMPACT STATEMENT****REVISED****(REGULATIONS AND ORDERS)**

STD. 399 (REV. 12/2008)

**See SAM Section 6601 - 6616 for Instructions and Code Citations**

DEPARTMENT NAME CA Depart of Food and Agriculture (CDFA)	CONTACT PERSON Tony Herrera, Program Supervisor	TELEPHONE NUMBER (916) 900-5060
DESCRIPTIVE TITLE FROM NOTICE REGISTER OR FORM 400 Shell Egg Food Safety		NOTICE FILE NUMBER Z 2012-0626-03

**ECONOMIC IMPACT STATEMENT****A. ESTIMATED PRIVATE SECTOR COST IMPACTS (Include calculations and assumptions in the rulemaking record.)**

1. Check the appropriate box(es) below to indicate whether this regulation:

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> a. Impacts businesses and/or employees | <input type="checkbox"/> e. Imposes reporting requirements  |
| <input checked="" type="checkbox"/> b. Impacts small businesses            | <input type="checkbox"/> f. Imposes prescriptive instead of performance   |
| <input checked="" type="checkbox"/> c. Impacts jobs or occupations         | <input type="checkbox"/> g. Impacts individuals   |
| <input checked="" type="checkbox"/> d. Impacts California competitiveness  | <input type="checkbox"/> h. None of the above (Explain below. Complete the Fiscal Impact Statement as appropriate.) |

h. (cont.) \_\_\_\_\_

(If any box in Items 1 a through g is checked, complete this Economic Impact Statement.)

2. Enter the total number of businesses impacted: 1,151 Describe the types of businesses (Include nonprofits.): 10 processing plants, 608 that are both processing plants and producers, 202 wholesalers, and 331 producersEnter the number or percentage of total businesses impacted that are small businesses: unknown3. Enter the number of businesses that will be created: -- eliminated: --Explain: It is unknown at this time the businesses created/eliminated; cost impacts affect the marketing of eggs in California.4. Indicate the geographic extent of impacts:  Statewide  Local or regional (List areas.): \_\_\_\_\_5. Enter the number of jobs created: -- or eliminated: -- Describe the types of jobs or occupations impacted: It is unknown at this time the number of jobs created/eliminated; cost impacts affect the marketing of eggs in California.

6. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here?

 Yes  No If yes, explain briefly: Due to estimated cost impacts, producers may choose to not market their eggs in California.
**B. ESTIMATED COSTS (Include calculations and assumptions in the rulemaking record.)**

1. What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime? \$ \_\_\_\_\_ \*

- |  |                                       |              |
|--|---------------------------------------|--------------|
| a. Initial costs for a small business: \$ <u>335,000</u>   | Annual ongoing costs: \$ <u>1,228</u> | Years: _____ |
| b. Initial costs for a typical business: \$ <u>335,000</u> | Annual ongoing costs: \$ <u>1,228</u> | Years: _____ |
| c. Initial costs for an individual: \$ <u>N/A</u>          | Annual ongoing costs: \$ <u>N/A</u>   | Years: _____ |

d. Describe other economic costs that may occur: A revised Economic Impact Assessment is included in this filing. Approx. \$385 m for initial costs for new construction; approx. \$1,413,320 ongoing for vaccination & testing for the poultry industry.

**ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)**

2. If multiple industries are impacted, enter the share of total costs for each industry: \_\_\_\_\_

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements. (Include the dollar costs to do programming, record keeping, reporting, and other paperwork, whether or not the paperwork must be submitted.): \$ N/A

4. Will this regulation directly impact housing costs?  Yes  No If yes, enter the annual dollar cost per housing unit: \_\_\_\_\_ and the number of units: \_\_\_\_\_

5. Are there comparable Federal regulations?  Yes  No Explain the need for State regulation given the existence or absence of Federal regulations: FAC 27521, 27531, 27533, 27573 & 27637 authorize CDFA to regulate the egg industry.

Enter any additional costs to businesses and/or individuals that may be due to State - Federal differences: \$ 0

**C. ESTIMATED BENEFITS (Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.)**

1. Briefly summarize the benefits that may result from this regulation and who will benefit: The Department believes the benefits mitigate any potential adverse economic impacts. Salmonella enterica serotype enteritidis (SE) is among the leading causes of bacteria in shell eggs. The benefits are a healthful product marketed in the state.

2. Are the benefits the result of:  specific statutory requirements, or  goals developed by the agency based on broad statutory authority? Explain: FAC 27521, 27531, 27533, 27573 & 27637 authorize CDFA to regulate the egg industry.

3. What are the total statewide benefits from this regulation over its lifetime? \$ unknown

**D. ALTERNATIVES TO THE REGULATION (Include calculations and assumptions in the rulemaking record. Estimation of the dollar value of benefits is not specifically required by rulemaking law, but encouraged.)**

1. List alternatives considered and describe them below. If no alternatives were considered, explain why not: CDFA considered and rejected two alternatives as detailed in the rulemaking file. (1) Delaying action until the enactment of HR 3798/Egg Product Insp. Act]; (2) Enact specified provisions of the European Union (EU) 1999/74/EC, July 19, 1999.

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered:

Regulation:	Benefit: \$ <u>0</u>	Cost: \$ <u>0</u>
Alternative 1:	Benefit: \$ <u>0</u>	Cost: \$ <u>0</u>
Alternative 2:	Benefit: \$ <u>0</u>	Cost: \$ <u>0</u>

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives: No cost/benefit analysis of each alternative was considered at this time. HR 3798 has yet to be enacted and this proposal is consistent with EU 1999/74/EC; however, not all provisions were feasible at this time for inclusion in this proposal.

4. Rulemaking law requires agencies to consider performance standards as an alternative, if a regulation mandates the use of specific technologies or equipment, or prescribes specific actions or procedures. Were performance standards considered to lower compliance costs?  Yes  No

Explain: This proposal does not mandate the use of specific technologies or equipment.

**E. MAJOR REGULATIONS (Include calculations and assumptions in the rulemaking record.) Cal/EPA boards, offices, and departments are subject to the following additional requirements per Health and Safety Code section 57005.**

**ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)**

1. Will the estimated costs of this regulation to California business enterprises exceed \$10 million ?  Yes  No (If No, skip the rest of this section.)

2. Briefly describe each equally as an effective alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Alternative 1: Exclude from the requirements of this proposal all producers using a treatment such as pasteurization for shell eggs

Alternative 2: None considered

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Regulation:	\$ _____	Cost-effectiveness ratio: \$ _____
Alternative 1:	\$ _____	Cost-effectiveness ratio: \$ _____
Alternative 2:	\$ _____	Cost-effectiveness ratio: \$ _____

**FISCAL IMPACT STATEMENT**

A. FISCAL EFFECT ON LOCAL GOVERNMENT (Indicate appropriate boxes 1 through 6 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

1. Additional expenditures of approximately \$ \_\_\_\_\_ in the current State Fiscal Year which are reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code. Funding for this reimbursement:
- a. is provided in \_\_\_\_\_, Budget Act of \_\_\_\_\_ or Chapter \_\_\_\_\_, Statutes of \_\_\_\_\_
  - b. will be requested in the \_\_\_\_\_ Governor's Budget for appropriation in Budget Act of \_\_\_\_\_  
(FISCAL YEAR)
2. Additional expenditures of approximately \$ \_\_\_\_\_ in the current State Fiscal Year which are not reimbursable by the State pursuant to Section 6 of Article XIII B of the California Constitution and Sections 17500 et seq. of the Government Code because this regulation:
- a. implements the Federal mandate contained in \_\_\_\_\_
  - b. implements the court mandate set forth by the \_\_\_\_\_  
court in the case of \_\_\_\_\_ vs. \_\_\_\_\_
  - c. implements a mandate of the people of this State expressed in their approval of Proposition No. \_\_\_\_\_ at the \_\_\_\_\_  
election; (DATE)
  - d. is issued only in response to a specific request from the \_\_\_\_\_  
\_\_\_\_\_, which is/are the only local entity(s) affected;
  - e. will be fully financed from the \_\_\_\_\_ authorized by Section \_\_\_\_\_  
(FEES, REVENUE, ETC.)  
\_\_\_\_\_ of the \_\_\_\_\_ Code;
  - f. provides for savings to each affected unit of local government which will, at a minimum, offset any additional costs to each such unit;
  - g. creates, eliminates, or changes the penalty for a new crime or infraction contained in \_\_\_\_\_
3. Savings of approximately \$ \_\_\_\_\_ annually.
4. No additional costs or savings because this regulation makes only technical, non-substantive or clarifying changes to current law regulations.

**ECONOMIC AND FISCAL IMPACT STATEMENT cont. (STD. 399, Rev. 12/2008)**

5. No fiscal impact exists because this regulation does not affect any local entity or program.
6. Other,

**B. FISCAL EFFECT ON STATE GOVERNMENT** (Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

1. Additional expenditures of approximately \$ \_\_\_\_\_ in the current State Fiscal Year. It is anticipated that State agencies will:
- a. be able to absorb these additional costs within their existing budgets and resources.
- b. request an increase in the currently authorized budget level for the \_\_\_\_\_ fiscal year.
2. Savings of approximately \$ \_\_\_\_\_ in the current State Fiscal Year.
3. No fiscal impact exists because this regulation does not affect any State agency or program.
4. Other.

**C. FISCAL EFFECT ON FEDERAL FUNDING OF STATE PROGRAMS** (Indicate appropriate boxes 1 through 4 and attach calculations and assumptions of fiscal impact for the current year and two subsequent Fiscal Years.)

1. Additional expenditures of approximately \$ \_\_\_\_\_ in the current State Fiscal Year.
2. Savings of approximately \$ \_\_\_\_\_ in the current State Fiscal Year.
3. No fiscal impact exists because this regulation does not affect any federally funded State agency or program.
4. Other.

FISCAL OFFICER SIGNATURE 	Jody Lusby, CDFA Budget Officer DATE 1/17/13
AGENCY SECRETARY <sup>1</sup> APPROVAL/CONCURRENCE 	Dr. Annette Jones, State Veterinarian & Director, AHFSS DATE 1/21/13
DEPARTMENT OF FINANCE <sup>2</sup> APPROVAL/CONCURRENCE 	PROGRAM BUDGET MANAGER DATE

1. The signature attests that the agency has completed the STD.399 according to the instructions in SAM sections 6601-6616, and understands the impacts of the proposed rulemaking. State boards, offices, or department not under an Agency Secretary must have the form signed by the highest ranking official in the organization.
2. Finance approval and signature is required when SAM sections 6601-6616 require completion of Fiscal Impact Statement in the STD.399.