

## **Economic Impact NOP Proposed Rule RIN 0581-AD44**

- A. Many new facilities have been constructed in the last 2 years to accommodate a growing market demand. The growth rate experienced over the last 8 years has met price restriction and growth in the sector has stopped.
- B. Nielsen Scan Track Data (all channels) indicates growth has been reduced from 33% to 2.4%. The price spread between Organic Eggs and Generic Eggs has increased from \$1.80/dozen to \$3.15/dozen, while the average retail price for Organic Eggs has been reduced from \$4.93 to \$4.82. The Proposed Rule assumes consumers will pay higher prices for Organic Eggs, this data indicates consumers will not pay higher prices. Exhibit 1 – A and 1 – B (Page 5 & 6)

- C. Comment by Michigan State University, Iowa State University and Dr. Ken Anderson NCSU all indicate an Economic Impact in excess of \$500,000 annually. Dr. Anderson co-authored the original Vukina Study, commissioned by NOP. The Vukina Study, is now outdated because of the mid and large size farmer impact. The numbers of Mid and Large size Organic Egg Farmers impacted by the Proposed Rule has changed dramatically since the Vukina study, as confirmed by Dr. Anderson in his comment. According to the Vukina Study “Economic Effect of Proposed Rule Changes in Living Conditions for Laying Hens under NOP” Summary Presented at 2014 Poultry Science, (page 85) indicates Mid Size Layer producer organic layer inventories to be 4,143,466 and Large Producer organic layer inventories to be 1,227,694. Total Mid and Large Size in 2011 5,371,160 compared to known inventories of Mid and Large Size producer inventories to be 9,016,000. Using these inventories the Vukina Option 3 (page 89) which mirrors the Proposed Rule, indicates an impact of \$532,244,533 annually. Exhibits 2 through 4 (Page 7 - 9)

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- D. Independent studies have shown the impact to be \$588,687,327 using more recent cost records.
- E. Loss of revenue to Organic Soybean and Organic Corn Farmers based on the Proposed Rule would be \$155,919,215 Exhibit 10 (Page 18)

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## Exhibit 2

Vukina et al 2012 Organic Housing Phase 2 Report Table			
ESTIMATED REGULATORY COST MID & LARGE SIZE FARMERS			
	Current Option 1 & 2	Proposed Opt 3	Added Cost/Doz
<b>Fixed Costs</b>			
House	\$ 130,000	\$ 130,000	
Composter	\$ 11,500	\$ 11,500	
Equipment Total	\$ 172,500	\$ 172,500	
Generator	\$ 24,150	\$ 24,150	
Cooler	\$ 18,975	\$ 18,975	
Veranda (land plus fencing and cover)	\$ 1,288	\$ 1,739	
Organic certification	\$ 8,000	\$ 3,500	
Insurance (0.5%)	\$ 19,931	\$ 19,931	
Property tax (0.8%)	\$ 31,890	\$ 31,890	
<b>TOTAL FIXED COST</b>	<b>\$ 418,234</b>	<b>\$ 414,184</b>	
<b>Variable Costs</b>			
Pullets	\$ 600,000	\$ 81,000	
Wood chips	\$ 21,000	\$ 21,000	
Utilities*	\$ 80,040	\$ 244,307	
Feed	\$ 2,683,040	\$ 381,274	
Labor**	\$ 228,602	\$ 2,329	
Processing and packaging fee	\$ 984,060	\$ 132,848	
Manure cleanout***	\$ 50,000	\$ 10,000	
Miscellaneous	\$ 15,000	\$ 10,000	
<b>TOTAL VARIABLE COST</b>	<b>\$ 4,661,742</b>	<b>\$ 882,758</b>	
<b>TOTAL COST</b>	<b>\$ 5,079,975</b>	<b>\$ 1,296,943</b>	
<b>Total cost per bird placed</b>	<b>\$ 50.80</b>	<b>\$ 96.07</b>	
<b>Total cost per dozen eggs</b>	<b>\$ 2.07</b>	<b>\$ 3.91</b>	
<b>Break-even price calculation</b>			
	<b>Result</b>	<b>Result</b>	
Eggs produced	2,460,150	332,120	
Breaker market revenue	\$ 364,102	\$ 49,154	
Organic market revenue	\$ 4,715,873	1,247,789	
<b>Break-even organic price</b>	<b>\$ 2.396</b>	<b>\$ 4.696</b>	<b>\$ 2.300</b>
<b>Percent increase in break-even organic price</b>		<b>96.00%</b>	
Total Layer Inventory Large Size 2016			9,016,000
Vukina Eggs per Layer/Year			308
Vukina Dozen Eggs per Layer/Year			25.67
Total Dozen Per Year Produced Large Size			231,410,667
<b>Dollars Per Year Economic Impact</b>			<b>\$532,244,533</b>

## Exhibit 3

VUKINA ET AL.: ORGANIC LAYERS' LIVING CONDITIONS

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Table 4. Estimated costs of producing organic eggs under different scenarios for large operations in 2011

Item	Baseline	Option 2	Option 3
Production volume			
Birds per operation (n)	100,000	100,000	13,500
Organic eggs (dozen)	1,968,120	1,968,120	265,696
Breaker market eggs (dozen)	492,030	492,030	66,424
Costs per farm (\$)			
Total fixed costs	3,986,200	3,986,200	3,986,200
Annualized fixed costs	418,234	418,234	414,184
Variable costs	4,661,742	4,661,742	882,758
Total annual costs	5,079,975	5,079,975	1,296,943
Breaker market eggs revenue adjustment <sup>1</sup>	364,102	364,102	49,154
Costs per dozen eggs			
Break-even revenue per bird (\$)	47.16	47.16	92.43
Break-even price per dozen organic eggs (\$)	2.40	2.40	4.70
Percentage increase over baseline		0.0	96.0

<sup>1</sup>Breaker market egg price assumes \$0.74 per dozen.

each of the regulatory options and contrasted these numbers with the industry total revenue. Under some scenarios, the estimated total industry costs are zero because the representative operations are in compliance with the regulation. Table 5 shows that the estimated total organic eggs industry costs due to the proposed regulation under option 2 are \$0. Table 6 presents the estimated total industry costs under option 3, for which the total annual regulatory costs are estimated to be \$68.1 million. These estimates represent 17% of estimated total industry revenue.

All baseline and cost-shifting scenarios are based on the assumption of a representative producer. To the extent that the entire egg industry is fairly homogenous with respect to its cost structure within each size category, the representative agent approach is adequate. However, if the industry is technologically highly heterogeneous, then the representative agent approach is not going to capture all specific nuances and idiosyncrasies of different production processes, and a complete industry survey would be required.

All cost-shift scenarios are based on the intermediate length of the run (5-yr horizon), where changes in variable cost through input and output adjustments are possible together with some changes in fixed cost through smaller adjustments in land, buildings, and equipment. However, potential entry and exit of firms, as well as the new construction of large-scale production facilities by existing firms as the result of regulation, is not considered in the current analysis.

In light of this information, the proposed regulation regarding indoor and outdoor stocking rates was analyzed by first adjusting the indoor stocking rates by reducing the number of animals until the condition is satisfied. In other words, we ignored an unlikely possibility that a producer would opt to construct a brand new housing facility to satisfy the indoor stocking rate constraint to keep the production at the original preregulation level. If and when, after this adjustment took place, the new proposed outdoor stocking rate is still binding, the producer was allowed to purchase additional land at the prevailing market land prices. In some cases, the stocking rate regulation requirements are so severe, based on the interview responses, we found out that the reduction in revenue associated with the required reduction in the number of animals and the corresponding increase in average total cost would force some firms to exit.

#### Regulatory Feasibility of Organic Egg Production Under Option 3

In conducting data collection and analyses for the regulatory options, we identified several concerns regarding the feasibility of complying with the requirements under option 3 for egg production. The interviews with organic egg industry participants and other experts revealed important reservations about the proposed regulations as presented in the option 3 scenario.

## Exhibit 4

VUKINA ET AL.: ORGANIC LAYERS' LIVING CONDITIONS

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Table 1. Estimated number of Certified Organic Poultry and Egg Producers and Operations by size in 2011<sup>1</sup>

Stock or species	***** Nr ~ 2016	Number of birds	Estimated percentage of production	Estimated number of producers <sup>2</sup>	Percentage of producers
Layer hens (inventory)	13,000,000	7,673,085	100	580	100
Small (1,000 to 16,000 hens)		2,301,925	30	430	74
Midsize (16,000 to 100,000 hens)	9,016,000	4,143,466	54	145	25
Large (more than 100,000 hens)		1,227,694	16	5	1

<sup>1</sup>Based on information collected by USDA-Agricultural Marketing Service [21].<sup>2</sup>The number of producers for each size category is estimated by assigning all producers of each certifying agency to a size category based on the average production of operations under the certifying agency.

## RESULTS AND DISCUSSION

The analysis of the proposed rules on the cost of production of organic eggs starts with the production of layer pullets as the first stage in the egg production cycle. Small pullet operations will typically not be affected by the proposed regulations in either regulatory scenario. In contrast, large pullet producers will be affected in both regulatory scenarios related to the outdoor access after 16 wk of age. To mitigate the effect of these proposed rules, the pullet growers indicated in interviews that they would shift the growing cycle so that the pullets would be moved into the laying facility by wk 16. Subsequently, this would shift the costs of raising the pullets from 16 to 18 wk, where there is no egg production to the egg producer. This would result in the suppression of feed conversion as well as the increase in some utility costs during those 2 wk. However, the price of pullets, if transferred 2 wk earlier, will have to drop, thereby offsetting an increase in cost incurred by layer operations. Therefore, the net effect of regulation on organic egg production through the pullets segment of the market is likely to be zero.

Next, we turn to eggs. Based on our information gathering, the representative typical organic egg producers, regardless of size, currently operate under the requirements proposed under option 2; hence, the effect of proposed regulation on the break-even price is zero. In contrast, the regulatory proposal summarized in option 3 will have multiple effects on the cost structure of representative midsize- and large-scale organic egg producers through

- a one-time (fixed) cost associated with retrofitting the house to install more exit holes, and

- an increased requirement for more outdoor access, which will be reflected in fencing costs and the increased cost of land, increased mortality and reduced feed conversion associated with a substantially increased outdoor area; and additional heating costs to maintain the indoor environment within the thermal neutral zone of the chickens.

However, when it comes to large producers, the most significant effect of option 3 will be reflected in the requirement to significantly reduce the population density on the established farms in response to the proposed regulation regarding the indoor density, with an enormous effect on the revenue reduction that could cause some of the large producers to exit the organic industry and convert their operations into conventional egg production. The combined effect of the proposed regulation in option 3 is estimated to be a 6.8% increase in the break-even price for midsize producers and a 96% increase in the break-even price relative to the baseline cost scenario for large producers. We describe the derivation of these estimates in subsequent sections.

*Small Operations (Fewer than 16,000 Hens)*

The summary of the regulatory effects of different regulatory options vis-à-vis the baseline for small egg producers is represented in Table 2 [22]. As far as indoor housing requirements are concerned, a typical small organic egg producer should automatically satisfy all of the regulatory option 2 requirements. The same is true for the outdoor access requirement. As a result, the percentage increase in the break-even organic price relative to the baseline is 0%. Similar to option

## **Economic Impact NOP Proposed Rule RIN 0581-AD44 Conversion to Cage Free Analysis**

- A. There is significant added facility cost using facilities built for Organic Production: Exhibit 5 (Page 12)
  - Cost of construction based on Proposed Rule Standards is \$57.98/Organic Layer Including pullet facilities.
  - Cost of construction for Cage Free Production is \$37.81/Cage Free Layer including pullet facilities.
- B. Using Organic facilities to produce Cage Free, results in tremendous new capital investment in Organic facilities to meet the needs of current customers. Retailers today demand adequate supplies of Organic Eggs, prefer for all products to be shipped together reducing freight, handling and loss. Most prefer one vendor of record. Farmers will be forced to reinvest in Organic Production to meet Proposed Rule Standards.



## **Economic Impact NOP Proposed Rule RIN 0581-AD44 Conversion to Cage Free Analysis**

- C. Many Organic Egg farmers rely solely on Organic Production and do not have Cage Free markets as an alternative. They've invested in this business under the existing standards, some, their lifetime assets, to now be faced with obsolete facilities, unable to meet the Proposed Rule standards of outdoor access.
- D. While many retailers have made announcements of moving to Cage Free over the next 10 years. The consumer movement to Cage Free has taken a slow start. Many producers have added Cage Free flocks, only to sell Cage Free production as generic eggs, taking tremendous losses. The forced addition of production from Organic Facilities will drive some Cage Free farmers out of business.



**Economic Impact NOP Proposed Rule RIN 0581-AD44  
Conversion to Cage Free Analysis**

***Exhibit 5***

<b>Replacement Cost of Existing Mid &amp; Large Size Farmers</b>		
	<b>Proposed Rule Organic \$</b>	<b>Cage Free \$</b>
Number Layers Current	9,016,000	9,016,000
<b>Buildings &amp; Equipment</b>	Per Layer	Per Layer
Land Improvements	\$ 1.52	\$ 1.52
Building Cost/Pullet	\$ 8.31	\$ 4.95
Equipment Cost/Pullet	\$ 9.07	\$ 6.95
Building Cost/Layer	\$ 18.15	\$ 10.11
Equipment Cost/Layer	\$ 20.93	\$ 14.28
Total/Layer	\$ 57.98	\$ 37.81
<b>Total Bldg's &amp; Equip</b>	<b>\$522,774,728</b>	<b>\$340,912,760</b>

## **Economic Impact NOP Proposed Rule RIN 0581-AD44**

### ***Exhibit 6***

#### ***Standards compliance at the end of one (1) year from date of Final Regulation***

***205.241 (b) (3) Natural Light sufficient to read a newspaper.*** In addition to being a difficult standard for certifiers to validate, it is impossible to have natural light in a two story building that is 113' wide, with solid sidewalls which are necessary in colder climates and currently use artificial light with great success and excellent performance.

***205.241 (b) (8) For pullets, no more than 3.0 pounds per square foot of indoor space.*** In some facilities pullet space would need to be increased 100%. It would not be economically feasible to double the investment in pullet facilities, therefore eliminating the five (5) year accommodation of outdoor space requirements.

***205.241 (d) (7) Nest box training limited to not more than two (2) weeks.*** For many flocks, 2 weeks is not adequate time for training to use nest boxes. Flocks not trained properly will result in higher mortality and increased floor eggs. Research shows an increased Food Safety hazard in floor eggs.

## **Economic Impact NOP Proposed Rule RIN 0581-AD44**

### ***Exhibit 6 cont'd***

#### ***Standards compliance at the end of five (5) years from date of Final Regulation***

On many farms, it is not possible or economically feasible to comply with:

##### ***205.241 ( c ) Outdoor Space Requirements***

Specifically:

***205.241 ( c ) (2) All birds must be able to exit or return within one hour.*** On farms with more than two houses, it is impossible to have enough openings for all birds to pass in and out in one hour.

***205.241 ( c ) (3) No more than 2.25 pounds of hen per square foot of outdoor space.*** It is physically impossible to comply with ( c ) (2) and ( c ) (3) in many facilities built under current standards. Many farms have property line setback restrictions, water runoff restrictions and not enough outdoor space for 2.25 pounds per bird. If space were allowed at the ends of buildings, there is not enough building wall space for all birds to exit and return within one hour.

***205.241 © (6) Covered and screened outdoor access attached to the building is not allowed as outdoor access or indoor access.***

***205.241 (d) (4) Risk to soil or water quality.*** It is assumed this standard is further described in....

***205.241 (e) Producer must manage in a way to not put soil and water at risk.*** In many jurisdictions, it is impossible to comply with this standard and comply with local and state water run off standards.

**Economic Impact NOP Proposed Rule RIN 0581-AD44****Exhibit 10**

<b>Organic Corn and Soybean Impact of Proposed Rule</b>				
	<b>Current Single Floor Slat</b>	<b>Current Single Floor Aviary</b>	<b>Current Two Story Aviary</b>	<b>Total</b>
<b>Commercial Industry</b>				
Number Layers Current	3,555,000	4,433,000	1,028,000	9,016,000
Dozen Produced/Yr	90,297,000	112,598,200	26,111,200	229,006,400
Dozen Produced/Yr Proposed	11,139,221	12,355,327	1,432,582	24,927,131
Tons Organic Feed Current	167,049	208,307	48,306	423,662
Tons Organic Feed Post Rule	20,608	22,857	2,650	46,115
Bushels Organic Corn Current	3,842,137	4,791,053	1,111,032	9,744,222
Bushels Organic Corn Post Rule	473,974	525,719	60,956	1,060,649
Bushels Organic Soybeans Current	1,406,556	1,753,942	406,734	3,567,233
Bushels Organic Soybeans Post Rule	173,516	192,459	22,315	388,290
CYOC/ \$ Bushel	\$ 11.00			
CYSB/ \$ Bushel	\$ 19.00			
Dollars Less Organic Corn	-\$37,049,798	-\$46,918,677	-\$11,550,827	-\$95,519,302
Dollars Less Organic Soybeans	-\$23,427,774	-\$29,668,181	-\$7,303,958	-\$60,399,913
<b>Total</b>				<b>-\$155,919,215</b>