Regulatory Impact Analysis

ORGANIC LIVESTOCK AND POULTRY PRACTICES

WITHDRAWAL

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This Regulatory Impact Analysis (RIA) reviews the Preliminary Regulatory Impact Analysis (PRIA) published December 18, 2017 and alignment with Executive Orders 12866 and 13563 for the final rule to withdraw the Organic Livestock and Poultry Practices final rule (OLPP final rule) that was published on January 19, 2017.

Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives, and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility.

Executive Order 13771 directs Agencies to identify at least two existing regulations to be repealed for every new regulation unless prohibited by law. The total incremental cost of all regulations issued in a given fiscal year must have costs within the amount of incremental costs allowed by the Director of the Office of Management and Budget, unless otherwise required by law or approved in writing by the Director of the Office of Management and Budget. This final rule is an EO 13771 deregulatory action.

The OLPP final rule RIA published in January 2017 summarized the range of costs, benefits, and transfers for that final rule. That RIA focused on the requirements for outdoor access and space for poultry, specifically organic egg and broiler producers, because these producers would incur costs to comply with the outdoor access and space requirements.

The estimated costs in the OLPP final rule were based on three potential scenarios. First, if the rule were implemented and if all organic livestock and poultry producers were to come into compliance, the estimated cost to the industry would have been $28.7 to $31 million each year.

Second, if 50 percent of the organic egg producers moved to the cage-free egg market and the organic populations continue to grow at historical rates, the costs would be $11.7 - $12.0 million. Third, if 50 percent of the organic egg producers moved to the cage-free egg market and there were no new entrants that could not already comply, the costs would be $8.2 million. These costs did not include an additional $3.9 million associated with paperwork burden under the "full compliance" scenario. The paperwork costs under the remaining two scenarios were estimated to be $1.95 million due to half of the organic producers moving to cage-free.

In the OLPP final rule, AMS also estimated transfers ranging from $79.5 to $86.3 million annually if 50 percent of the organic egg producers moved to the cage-free egg market and organic egg production continued to grow at historical rates. Transfers accounted for market adjustments that would be caused if the rule were implemented and producers exited the organic market. Transfers were estimated at $43.7-$47.4 million if 50 percent of the organic egg producers moved to the cage-free egg market and there were no new entrants that could not already comply. No transfers were anticipated if all organic livestock and poultry producers were to come into compliance.

The estimated benefits in the OLPP final rule spanned a wider range than the estimated costs and were based on research that measured consumers' willingness-to-pay for outdoor access for laying hens. The rule acknowledged that the benefits were difficult to quantify. First, if all organic livestock and poultry producers were to come into compliance, the estimated benefits were estimated at $16.3 to $49.5 million each year. Second, if 50 percent of the organic egg producers moved to the cage-free egg market and organic egg production continued to grow at historical rates, the estimated benefits were estimated at $4.5 - $13.6 million. Third, if 50 percent of the organic egg producers moved to the cage-free egg market and there were no new

entrants that could not already comply, the estimated benefits were estimated at $4.1 to $12.4 million.

In reviewing the OLPP final rule, USDA found that the calculation of benefits contained a mathematical error in applying the discount rates of 7 percent and 3 percent. Using the correct discounting formula to estimate benefits resulted in a range of $3.3 to $31.6 million per year. The costs of changes in practice were estimated to exceed these benefits for most RIA scenarios, if the OLPP final rule were implemented. The only exception was for the "full compliance" scenario, where the high end of the benefits may have exceeded the costs of changes in practice. However, even under this scenario, the costs exceeded the benefits once paperwork costs ($3.9 million) were accounted for. The recalculation of benefits is discussed further below.

Crucially, as a result of reviewing the calculation of estimated benefits, AMS reassessed the economic basis for the rulemaking as well as the validity of the estimated benefits. On the basis of that reassessment, AMS finds little if any economic justification for the OLPP final rule.

The RIA for the OLPP final rule did not identify a significant market failure to justify the need for rule. The RIA noted a wide variance in production practices within the organic egg sector and asserted that "as more consumers become aware of this disparity, they will either seek specific brands of organic eggs or seek animal welfare labels in addition to the USDA organic seal." AMS also found that "The majority of organic producers also participate in private, third-party verified animal welfare certification programs." OLPP final rule RIA at 14. Variance in production practices and participation in private, third-party certification programs, however, do not constitute evidence of significant market failure.

First, while AMS recognizes that the purpose of the Organic Foods Production Act (OFPA) (7 U.S.C. 6501-6522) is to assure consumers that organically produced products meet a

consistent standard, that purpose does not imply that there should be no variation in organic production practices. Rather, a variety of production methods may be used to meet the same standard. Some may be more labor intensive and others more capital intensive, and some may be appropriate for small operations while others are appropriate for large operations. Importantly, producers adopt different production methods over time as technology evolves and enables operations to meet the same standard more efficiently. Moreover, producers may follow different standards with respect to aspects of production that are not relevant to organic certification or otherwise subject to regulation. Thus, variation in production practices is expected and does not stand as an indicator of a significant market failure.

Second, private third-party certification programs are common in the dynamic food sector. The fact that organic suppliers participate in such programs does not indicate a market failure with respect to the standards promulgated under the USDA NOP. Rather, the use of third-party certifications in addition to the USDA organic seal merely indicates that participants in the food sector seek ways to differentiate their products from those of their competitors. The fact that some aspects of a private certification may overlap with the requirements underlying the USDA organic seal demonstrates that food producers, manufacturers, and retailers use multiple methods to communicate with consumers about the attributes of the foods that they produce and sell. Private, third-party certifications reflect attributes that food sellers wish to emphasize and the existence of such certifications on organic products provides no evidence of a significant market failure relating to USDA organic standards. Nor is it clear that implementation of the OLPP final rule would reduce participation in third-party certification programs; instead, third-party certification programs may simply evolve as producers find new ways to distinguish their products.

In addition to the lack of a market failure justification, as discussed below, there are several calculation errors associated with the OLPP final rule RIA. Correction of those errors shows that estimated benefits likely were overstated in the OLPP final rule RIA. In any case, withdrawing the OLPP final rule prevents the negative cost impacts from taking effect, resulting in substantial organic poultry producer cost savings of $8.2 to $31 million annually, plus additional cost savings of $1.95-$3.9 million from paperwork reduction.

Table A presents a summary of the estimated costs and revised, corrected benefits associated with the OLPP final rule. Withdrawing the OLPP final rule prevents these impacts from taking effect, resulting in substantial organic poultry producer cost savings of $8.2 to $31.0 million annually. In addition, cost savings of $3.9 million for avoiding the estimated paperwork burden associated with the OLPP final rule are expected under the "full compliance" scenario. The paperwork costs under the remaining two scenarios are expected to be $1.95 million due to half of the organic producers moving to cage-free.

Table A. Summary of costs avoided due to withdrawal of the OLPP final rule.

Assumed conditions	**Affected population**	**Costs, Savings millions[a]**	**Revised Forgone Benefits, millions**	**Transfers, millions**
All producers remain in organic market; Organic layer and broiler populations continue historical growth rates after rule.	Organic layer and organic broiler production at full implementation of rule, i.e., 2022 for layers; 2020 for broilers.	$28.7 - $31.0	$13.0 - $31.6	N/A

50% of organic layer production in year 6 (2022), moves to the cage-free market. Organic layer and broiler populations continue historical growth rates after rule.	Organic layer and organic broiler production at full implementation of rule, i.e., 2022 for layers; 2020 for broilers.	$11.7 - $12.0	$3.6 - $8.7	$79.5 - $86.3
50% of current organic layer production moves to the cage-free market in year 6 (2022). There are no new entrants after publication of this rule that cannot comply.	Current organic layer production; organic broiler production at full implementation of rule in 2020.	$8.2	$3.3 - $8.0	$43.7 - $47.4
Other impacts: Estimated paperwork burden impacts avoided: $3.9 million (first scenario); $1.95 million (second and third scenario)				

[a] All values in the costs, benefits and transfer columns of this table are annualized and discounted at 3% and 7% rates. See supporting spreadsheet available in regulations.gov for more details on the calculations, https://www.regulations.gov/document?D=AMS-NOP-15-0012-6688.

Poultry

First, for the OLPP withdrawal, AMS considered the costs and benefits of the outdoor access and space requirements (i.e., stocking density) for organic poultry production, as these were focal areas in the OLPP final rule (82 FR 7082). Based on this review, the revised assessment of consumer willingness to pay, correction of the mathematical formula for calculating the present value of future benefits, and the uncertain and difficult to quantify benefits of the outdoor access and space requirements for organic poultry production, AMS determined that the benefits do not justify their quantifiable costs and paperwork burden.

Further, the consistent growth in the organic egg market since 2006 does not support the conclusion in the OLPP Final Rule that organic eggs do not meet consumer expectations. AMS estimated production costs because of the outdoor access and space requirements would be between $8.2 and $31.0 million annually, due to increased compliance and regulatory burdens. In addition, $3.9-million in paperwork burden was expected. By withdrawing the OLPP final

rule, regulated entities avoid the costs from changes in practices and avoid the associated paperwork burden.

In reviewing the OLPP final rule during the rulemaking process of RIN 0581-AD74, AMS discovered a material error in the calculation of the benefits. We realized there were mathematical errors in applying the discount rates of 7 percent and 3 percent. Using the correct discounting formula for the estimated benefits results in costs exceeding benefits for all three RIA scenarios when the paperwork burden is factored in, if the OLPP final rule were implemented.

The correct discounting formula is:

$$NPV_C = B_1/(1+r)^1 + B_2/(1+r)^2 + B_3/(1+r)^3 + B_4/(1+r)^4 + B_5/(1+r)^5 + \ldots + B_{15}/(1+r)^{15}$$

Where NPV_C is the correct net present value of the benefits; B_t is the benefit in year t; r is the discount rate; and (1+r) is raised to the year t successively.

For the OLPP final rule RIA, the following incorrect formula was applied to get the incorrect net present value at the 3% discount rate (NPV_{IC3}):

$$NPV_{IC3} = B_1/(1+r)^1 + B_2/(1+r)^2 + B_3/(1+r)^2 + B_4/(1+r)^2 + B_5/(1+r)^2 + \ldots + B_{15}/(1+r)^2$$

In this incorrect formula, after the second year, the quantity (1+r) in the denominator is raised to the second power instead of the power corresponding to the proper year. For the 7% discount rate, the incorrect formula shown below was used (NPV_{IC7}):

$$NPV_{IC7} = B_1/(1+r)^1 + B_2/(1+r)^1 + B_3/(1+r)^1 + B_4/(1+r)^1 + B_5/(1+r)^1 + \ldots + B_{15}/(1+r)^1$$

In this incorrect formula, the quantity (1+r) in the denominator is raised to the first power instead of the power corresponding to the proper year in every year. In both cases, this results in overstating the net present value of the benefits. As time (t) progresses, the denominator $(1+r)^t$ gets larger, so any benefit divided by $(1+r)^t$ gets smaller. For example, if the benefit in year 10 is

$1000, the present value of that benefit today, using the 7% discount rate is $1000/(1+0.07)^{10}$ = $1000/1.97 = $508.35. In the NPV_{IC7} formula, that same benefit in year 10 would have been computed as $1000(1+0.07)^{1}$ = $1000/(1.07) = $934.58. All cost and transfer discounting was performed correctly.

Table B compares the calculation of benefits using the OLPP final rule's incorrect formula with the calculation of benefits using the Withdrawal's corrected formula. The benefit values in the final rule were derived from a published economic study about the additional consumer willingness to pay for a dozen eggs that come from chickens that have access to the outdoors.

The study reported a range in willingness to pay of $0.21-$0.49 per dozen eggs. AMS elected to show the range of estimates.

Table B. Comparison of Benefit Estimates: OLPP Final Rule (Incorrect) and Withdrawal (Corrected)

Comparison of Benefit Estimates Arising from the Mathematical Error					
Scenario	Category	Discount Rate	Estimate - High ($M)	Mean ($M)	Estimate - Low ($M)
Full Compliance	Incorrect	7%	49.5	35.4	21.2
	Corrected	7%	30.4	21.7	13.0
	Incorrect	3%	39.2	27.8	16.3
	Corrected	3%	31.6	22.6	13.6
50% Compliance with entry	Incorrect	7%	13.6	9.7	5.8
	Corrected	7%	8.4	6.0	3.6
	Incorrect	3%	10.8	7.7	4.5
	Corrected	3%	8.7	6.2	3.7
50% Compliance with no entry	Incorrect	7%	12.4	8.9	5.3
	Corrected	7%	7.6	5.5	3.3
	Incorrect	3%	9.9	7.0	4.1
	Corrected	3%	8.0	5.7	3.4

Table B demonstrates shows that with this mathematical correction, under all three scenarios and at both the 3 percent and 7 percent rates of discounts, the costs of compliance

exceed the estimated mean benefits when the paperwork burden is factored in. Even without the paperwork burden considered, only under the full compliance scenario at the high end of the range of estimated benefits were the estimated costs estimated to be less than the estimated benefits. This scenario is unlikely because it requires that all organic producers remain in the market despite compliance costs; assumes they can obtain sufficiently higher price premiums for their organic eggs to offset those costs even though no producer exited the market; and assumes the organic egg industry would enjoy historic growth, despite rising costs and likely competition from the growing cage-free egg industry.

During further review of the OLPP final rule, AMS discovered two additional errors in the calculation of the benefits. The first error is the use of an incorrect range in consumer's willingness to pay for livestock (chickens) to have access to the outdoors. The range of $0.21-$0.49 reflects consumer willingness to pay for a dozen eggs produced by chickens raised in a cage-free environment, without induced molting, and with outdoor access. The first two items are already required in the production of organic eggs. The OLPP final rule only added specificity to the existing requirement for outdoor access. Therefore, the range of consumer willingness to pay for the changes in the OLPP final rule was inflated to the extent it assumed consumers would pay a premium for practices that are already required in organic production. Rather than $0.21-$0.49 per dozen, the appropriate range is $0.16-$0.25 per dozen based on the range shown in Table 8 of the Heng, et. al (2013) for only willingness to pay for outdoor access:

> *(59%) of respondents were willing to pay a premium for eggs from hens given outdoor access (more space), with a mean premium of $0.25. In the subsample that did not receive the additional information, the mean premium for outdoor*

> *access (more space) was lower, at $0.16, with 81% (43%) of those willing to pay a premium (Heng et al, pp. 429)*[1].

AMS also believes that the range in the OLPP final rule was overstated because organic layers are already required to have access to the outdoors, and therefore, consumers are already paying for this benefit to a certain extent. In addition, the benefit estimates relied on a single academic study that used a relatively small survey sample size (924) to estimate these benefits.

The second error relates to the treatment of costs and benefits over time. In initial drafts of the OLPP final rule RIA, AMS applied a straight line reduction in both costs and benefits over time to reflect the economic life of egg and broiler producing structures. Both benefits and costs declined every year as a fraction of the industry structures became fully depreciated and reached the end of their economic lifetimes. For lack of better information, AMS assumed that the age distribution of these structures was uniform so an equal amount was depreciated every year. In the OLPP final rule RIA, AMS adopted a different approach, inadvertently leading to an inconsistency in the treatment of costs and benefits over time. Costs were instead estimated to be constant over time, but benefits were still straight line reduced over time. The same reasoning should have applied to the benefits to make the calculation of costs and benefits consistent.

Table C shows updated estimates that address both of these errors, as well as the mathematical error shown in Tables A and B above. On the low end of the costs and benefits, costs outweighed benefits in every scenario by a large margin. On the high end, benefits outweighed costs by a small margin. In all cases, the midpoint of the estimates indicate the OLPP final rule did not provide net benefits.

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[1] http://www.waeaonline.org/UserFiles/file/JAREDec20138Hengpp418-434.pdf

Table C. Summary of costs avoided due to withdrawal of the OLPP final rule with constant annual benefits, a revised benefit range, and correct discounting.

Assumed conditions	**Affected population**	**Costs, Savings millions[a]**	**Revised Forgone Benefits, millions**	**Transfers, millions**
All producers remain in organic market; Organic layer and broiler populations continue historical growth rates after rule.	Organic layer and organic broiler production at full implementation of rule, i.e., 2022 for layers; 2020 for broilers.	$28.7 - $29.9 (Midpoint = $29.8)	$19.2 - $33.7 (Midpoint = $26.5)	N/A
50% of organic layer production in year 6 (2022), moves to the cage-free market. Organic layer and broiler populations continue historical growth rates after rule.	Organic layer and organic broiler production at full implementation of rule, i.e., 2022 for layers; 2020 for broilers.	$11.7 - $12.0 (Midpoint = $11.9)	$5.3 - $17.1 (Midpoint = $11.2)	$79.5 - $86.3
50% of current organic layer production moves to the cage-free market in year 6 (2022). There are no new entrants after publication of this rule that cannot comply.	Current organic layer production; organic broiler production at full implementation of rule in 2020.	$8.2	$4.8 - $8.5 (Midpoint = $6.7)	$43.7 - $47.4
Other impacts: Estimated paperwork burden impacts avoided: $3.9 million (first scenario); $1.95 million (second and third scenario)				

[a] All values in the costs, benefits and transfer columns of this table are annualized and discounted at 3% and 7% rates.

Consistent with the OLPP final rule RIA, AMS estimates that aviaries (multi-level housing systems) account for 70 percent of organic egg production. The OLPP final rule would have likely created additional barriers for these producers to remain in the organic market, as they would not be permitted to continue using aviaries and would primarily need to acquire additional land or reduce the number of birds in the operation to obtain organic certification. Broiler producers would have primarily needed to construct new housing and/or reduce the number of birds in their operation. Access to adjacent land would have been a significant

obstacle to current organic producers. In many cases, adjacent land may already be designated for another use, e.g., existing roads or structures, and would be nearly impossible to acquire. In these scenarios, producers may have needed to move to new sites or obtain additional sites in more than one location, thus further increasing the costs of compliance.

As was discussed in the OLPP final rule RIA, we did not quantify the costs for overcoming such constraints or combination of constraints because it would entail several additional assumptions that would have introduced a high degree of uncertainty into the estimated values. (OLPP Final Rule RIA, page 26) Based on these obstacles, AMS believes that the full compliance scenario would have been unlikely. Instead, AMS believes that two-thirds of organic aviary operations and 17 percent of non-aviary operations would likely transition to the cage-free non-organic market; this represents 50 percent of total organic egg production. Under this scenario, costs would exceed benefits.

Additionally, AMS notes that the OLPP final rule RIA did not quantify the costs and benefits related to certain poultry living provisions of the OLPP final rule, especially indoor living conditions (e.g., lighting, perch space, ammonia monitoring, and distribution of doors to outdoor areas) because those requirements were assumed to generally codify existing industry practices.

Consideration of Alternatives

AMS considered three alternatives in developing this withdrawal of the OLPP final rule. The first alternative considered was to implement the Organic Livestock and Poultry Practices final rule on May 14, 2018, which is the current effective date. The second alternative was to further delay the final rule. The third alternative, which is the selected alternative, was to withdraw the final rule.

For the first alternative, if the OLPP final rule had become effective on May 14, 2018, the costs and transfers described in the OLPP final rule RIA would be expected to occur, resulting in requirements with substantial costs not supported by evidence of significant market failure or justified by the uncertain and speculative benefits of the OLPP final rule.

The second alternative considered was to further delay the OLPP final rule. This alternative, however, would have deferred the decision on whether to implement or withdraw to a future date, despite the agency having performed its review and received comments from the public. This alternative fails to achieve USDA's goal of reducing regulatory uncertainty.

AMS selected the third alternative, to withdraw the OLPP final rule. This alternative estimates cost savings for poultry producers of $8.2 to $31 million per year (based on 15-year costs). In addition, $1.95-$3.9 million in annual paperwork burden will not be incurred. As described in the PRIA, the range of benefits could be expected to be lower than shown in the OLPP final rule RIA. Given the unclear nature of the market failure, AMS gave clear preference to the lower end of the benefit range, which consistently fall below the costs associated with the OLPP final rule.