



March 17, 2016

**To:** Matthew Glover, Jane Land, and Clea Grady, Veganuary

**From:** Che Green, Faunalytics

**Re:** Addendum – Estimate of lives spared for Veganuary 2016

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Dear Team Veganuary,

Enclosed please find Faunalytics' rough estimate of the number of lives spared during and after Veganuary 2016 (though not necessarily attributable to the campaign). For the full details and formulas used to calculate each figure, please refer to the separate Excel spreadsheet.

The analysis is subject to a number of assumptions and limitations, as described later in this addendum. With those in mind, we cautiously estimate that the behavior change exhibited during the month of January 2016 spared nearly 24,000 animals. Most of that dietary change continued in the first week of February, sparing an additional estimated 5,700 animals.

Using the same general approach and allowing for recidivism, we estimate the "lifetime" changes that might occur if people stick with the diet they were eating during the first week of February. We estimate that more than 3.8 million animals could be spared under this scenario. We may be able to adjust this estimate after completing the six-month follow-up survey.

Please let me know if you have any questions or think the analysis warrants any adjustments based on better data. We look forward to continuing our work together!

Regards,  
Che

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# Veganuary 2016

## Participant Research and Impact

### Estimate of Lives Spared

#### Approach and Limitations

Compiling an estimate of farmed animal lives spared by participants in the Veganuary campaign is complex and requires making a number of assumptions. It also requires using relatively imprecise data (diet change) to calculate a specific number of lives spared, which is subject to limitations. Faunalytics used an approach similar to Veganuary's internal analysis in 2015, though we have the benefit of knowing the numbers of people who transitioned between diets in 2016. We provide an estimate for each time period and also estimate "lifetime" changes. For the details, please refer to the separate Excel file.

It is important to note that our analysis of "lives spared by Veganuary" is more accurately described as the behavior change that took place *during* Veganuary. While we are able to evaluate changes in participant behavior over time, we are not able to isolate Veganuary as the sole or even primary reason for those changes. This is particularly true given the long registration period that includes people who signed up as much as eleven months prior to the actual start of Veganuary 2016. We assume that the diet participants reported at registration (even as far back as February 2015) was maintained at least until the start of Veganuary 2016. We also assume that everyone who eats meat is an "average" omnivore.

Estimating animals spared involves first calculating the per capita slaughter of different animals. Due to the strong presence of Veganuary in both the UK and the US, we compiled slaughter statistics for both countries and used the average. For the UK, we used a combination of DEFRA<sup>i</sup> figures supplemented with data from Viva! UK<sup>ii</sup> for missing items (ducks and fish/shellfish). For the US, we used data summarized in the Counting Animals blog<sup>iii</sup> for all species of animals. To simplify our analysis, we used raw slaughter figures without adjusting for mortality or imports/exports; we also do not consider "feed fish" or bycatch. We do consider recidivism and elasticity, which impact the results substantially.

This simplification of the analysis likely results in a conservative estimate of lives spared. Mortality figures (animals who die on farms, but not from slaughter) are small in comparison to slaughter. Imports and exports have a meaningful impact on the slaughter numbers, but those figures are not readily available for the UK. It also appears that the US is a net exporter and the UK is a net importer of farmed animals, meaning these may somewhat offset each other. Not including fish used as feed for other animals or bycatch is a conservative approach and the actual impact may be 2-3 times larger if we included those figures.



While those who become vegan spare slightly more animals than those who become vegetarian, we do not have good data on the incremental number of lives spared. For purposes of this analysis, therefore, we assume that converting someone to a vegan diet has the same impact as converting someone to a vegetarian diet. In other words, our analysis does not consider dairy cows, laying hens/male chicks, or non-dietary aspects of veg\*ism. This means that the model does not provide any lives spared for people who started as vegetarians and became vegan. These are additional reasons that the estimate may be conservative.

On the other hand, when calculating lives spared, note that we assume that the conversion rates (e.g., from omnivore to vegan) apply to all Veganuary 2016 participants. However, we cannot be assured that the changes exhibited by follow-up respondents are representative given the 23% response rate to the follow-up survey and possible nonresponse bias. A very conservative approach would use the actual number of people who responded to the follow-up survey as the basis for our impact analysis. Faunalytics can provide this upon request; the impact with this approach would be about a fourth of the current estimate.

## Lives Spared During the Month of January

We can roughly estimate the number of animal lives spared based on the transitions that participants made from pre-Veganuary to the month of January. We do this by first calculating how many participants (survey respondents) made each of the possible transitions, proportionally and individually. Then we multiply the number of people making each type of transition by the monthly per capita slaughter figures associated with that particular change in diet. For details, please see the spreadsheet.

Note that we include the “negative” changes for completeness and because we cannot be positive that *any* of the changes (positive or negative) occurred specifically because of Veganuary 2016. However, it seems reasonable that Veganuary would be more likely to have caused the positive changes and less likely to have caused the negative changes in diet. Including both is a conservative judgment call. The table below summarizes the results by type of transition. We apply a 50% reduction to the total to allow for the average cumulative elasticity factor used in the ACE impact calculator.<sup>iv</sup>

The result is an estimate of nearly **24,000 lives spared** during the month of January 2016.

MONTH OF JANUARY	% Who Made Transition	Participants Transitioning	Lives Spared /Lost During Month
Omnivore > Pescetarian	2%	566	1,035
Omnivore > Vegetarian	4%	1,032	12,943
Omnivore > Vegan	13%	2,875	36,066
Pescetarian > Vegetarian	2%	560	6,000
Pescetarian > Vegan	6%	1,441	15,438
Vegetarian > Vegan	25%	5,687	0
Vegan > Omnivore	1%	226	-2,841
Vegan > Pescetarian	1%	182	-1,955
Vegan > Vegetarian	2%	503	0
Vegetarian > Omnivore	4%	944	-11,838
Vegetarian > Pescetarian	3%	598	-6,404
Pescetarian > Omnivore	2%	428	-782
Omnivore > Omnivore	10%	2,189	0
Pescetarian > Pescetarian	4%	868	0
Vegetarian > Vegetarian	15%	3,429	0
Vegan > Vegan	6%	1,422	0
<b>TOTAL</b>	<b>100%</b>	<b>22,951</b>	<b>47,661</b>
<b>Elasticity Adjusted (50%)</b>			<b>23,831</b>



## Lives Spared During First Week of February

We estimate the number of animal lives spared in the first week of February using the same approach, but based on per capita data converted to a *weekly* basis. The table below summarizes the results by type of transition for that week. Because most participants continued their animal product reductions or eliminations in the first week of February, the result is approximately one-fourth of the total for the month of January. The result is an estimate of more than **5,700 lives spared** during the first week of February 2016.

FIRST WEEK OF FEBRUARY	% Who Made Transition	Participants Transitioning	Lives Spared During Week
Omnivore > Pescetarian	3%	736	311
Omnivore > Vegetarian	5%	1,239	3,588
Omnivore > Vegan	10%	2,221	6,429
Pescetarian > Vegetarian	4%	937	2,318
Pescetarian > Vegan	5%	1,126	2,785
Vegetarian > Vegan	23%	5,316	0
Vegan > Omnivore	1%	157	-455
Vegan > Pescetarian	0%	113	-280
Vegan > Vegetarian	2%	428	0
Vegetarian > Omnivore	3%	679	-1,967
Vegetarian > Pescetarian	2%	453	-1,120
Pescetarian > Omnivore	1%	321	-135
Omnivore > Omnivore	11%	2,466	0
Pescetarian > Pescetarian	4%	912	0
Vegetarian > Vegetarian	18%	4,209	0
Vegan > Vegan	7%	1,636	0
<b>TOTAL</b>	<b>100%</b>	<b>22,951</b>	<b>11,472</b>
<b>Elasticity Adjusted (50%)</b>			<b>5,736</b>

## Lives Spared over Participant “Lifetime”

We estimate the number of animal lives spared over the course of a participant’s “lifetime” using a similar approach based on annual per capita data. The table below summarizes the results by type of transition for that average lifetime. We assume that participants maintain the level of dietary change they exhibited from pre-Veganuary to the first week of February. The average lifetime is calculated by subtracting the average participant age (36) from the average life expectancy of people in the UK and US (80) to obtain a figure of 44 for the number of potential years that an average participant could maintain the change. This is converted into a total potential lives spared, to which we apply the adjustment for elasticity and also adjust for likely rates of recidivism. Specifically, we assume that 16% of people maintain their changes throughout their lifetimes, based on the Faunalytics study of lapsed and current veg\*ns.<sup>v</sup> The other 84% maintain their changes (regardless of diet) for an average of seven years, which is based on the ACE analysis of Faunalytics data.<sup>vi</sup> The result is an estimate of more than **3.8 million lives spared** over participants’ lifetimes.

“LIFETIME”	% Who Made Transition	Participants Transitioning	Lives Spared During “Lifetime”
Omnivore > Pescetarian	3%	736	710,725
Omnivore > Vegetarian	5%	1,239	8,208,823
Omnivore > Vegan	10%	2,221	14,709,211
Pescetarian > Vegetarian	4%	937	5,303,592
Pescetarian > Vegan	5%	1,126	6,371,430
Vegetarian > Vegan	23%	5,316	0
Vegan > Omnivore	1%	157	-1,041,729
Vegan > Pescetarian	0%	113	-640,702
Vegan > Vegetarian	2%	428	0
Vegetarian > Omnivore	3%	679	-4,500,268
Vegetarian > Pescetarian	2%	453	-2,562,810
Pescetarian > Omnivore	1%	321	-309,803
Omnivore > Omnivore	11%	2,466	0
Pescetarian > Pescetarian	4%	912	0
Vegetarian > Vegetarian	18%	4,209	0
Vegan > Vegan	7%	1,636	0
<b>TOTAL</b>	<b>100%</b>	<b>22,951</b>	<b>26,248,468</b>
<b>Elasticity Adjusted (50%)</b>			<b>13,124,234</b>
<b>16% maintain changes for "lifetime"</b>			<b>2,099,877</b>
<b>84% maintain changes for 7 years</b>			<b>1,753,875</b>
<b>TOTAL</b>	<b>100%</b>	<b>22,951</b>	<b>3,853,752</b>

## Summary of Lives Spared

If we combine the estimates of lives spared for the month of January 2016, the first week of February 2016, and the adjusted “lifetime” changes from the previous page, then we end up with a total estimate of more than **3.8 million lives spared** during and following Veganuary 2016.

Time Period	Lives Spared
Month of January 2016	23,831
First week of February 2016	5,736
“Lifetime” Changes	3,853,752
<b>TOTAL</b>	<b>3,883,319</b>

Please note that we are combining relatively precise figures for the month of January and the first week of February with imprecise speculation about participants’ lifetimes. It is also worth repeating that this number is derived from many assumptions and is subject to some potentially critical limitations. In fact, it is entirely possible that the *actual* number of lives spared during and after Veganuary is different than the number shown here by an order of magnitude (or more). For more about these assumptions and limitations, please refer to the original report and the other parts of this addendum.

Although our analysis is simplified and assumes a constant rate of recidivism for people on all types of diets, many people transition toward and away from veg\*n diets over time. From the Faunalytics study, we know that almost a third (30%) of former vegetarians and vegans had lapsed more than once. Some current veg\*ns had also experienced past lapses in their diet, though this was a smaller proportion (16%). Additionally, more than a third (37%) of recidivists are interested in resuming a veg\*n diet, so our assumption that only 16% of Veganuary participants will maintain the diet may be conservative.

Finally, it is also worth mentioning again that these lives spared are not necessarily attributable to people’s participation in Veganuary 2016. There may be other factors that are causing people to change their diets, especially for those who registered long before the start of Veganuary 2016. Faunalytics encourages using these numbers with extreme caution and being as transparent as possible about the limitations. If you would like more guidance along these lines, please let us know.

## References

<sup>i</sup> See DEFRA: [https://data.gov.uk/dataset/slaughter\\_statistics](https://data.gov.uk/dataset/slaughter_statistics) and [https://data.gov.uk/dataset/poultry\\_and\\_poultry\\_meat\\_statistics\\_notice](https://data.gov.uk/dataset/poultry_and_poultry_meat_statistics_notice)

<sup>ii</sup> See Viva! UK: <http://www.viva.org.uk/what-we-do/slaughter/slaughter-farmed-animals-uk>

<sup>iii</sup> See Counting Animals: <http://www.countinganimals.com/how-many-animals-does-a-vegetarian-save/>

<sup>iv</sup> See ACE: [https://docs.google.com/spreadsheets/d/1iNDQIt9MRD4r1ws5M\\_2hQ-MNjMY-bcUra0fpOmF4Am0/edit#gid=0](https://docs.google.com/spreadsheets/d/1iNDQIt9MRD4r1ws5M_2hQ-MNjMY-bcUra0fpOmF4Am0/edit#gid=0)

<sup>v</sup> See Faunalytics: <https://faunalytics.org/feature-article/study-of-current-and-former-vegetarians-and-vegans/>

<sup>vi</sup> See ACE: <http://www.animalcharityevaluators.org/research/foundational-research/vegetarian-recidivism/#fourth>