



Comment on DeSmog, IATP and Feedback 21 April media briefing about a study on JBS greenhouse gas emissions

Context:

On 21 April 2022, the three organisations DeSmog, IATP and Feedback (authors) released a media briefing about their research finding of a purported 51% increase of GHG emissions by Brazilian food company JBS between the years 2016 and 2021. The media briefing was timed to be released on the day before JBS' annual general meeting on 22 April. Global Food and Agribusiness Network (GFAN) found this finding to be implausible and therefore investigated the published calculations and methods of the authors.

The main claims in the study by the authors are published on their first page like this¹:

World's largest meat company, JBS, increases emissions by 51% in five years despite 2040 net zero climate target, continues to greenwash its huge climate footprint

The company, which is the largest meat processor in the world, increased its annual greenhouse gas emissions by a whopping 51% between 2016 and 2021, from 280 million metric tonnes to 421.6 million metric tonnes (mmts), based on the Institute for Agriculture and Trade Policy (IATP)'s latest calculations.¹

This is more than fossil fuel giant Total's 2020 emissions.² It is more than Italy's annual climate footprint and 95% of France's (at 443 mmt). As JBS prepares for its

¹ Using the UN Food and Agriculture Organization's GLEAM model, GRAIN and IATP calculated JBS's 2016 emissions in [Emissions Impossible 2018](#). IATP has used the same methodology to update the company's 2021 emissions. See [Dataset here](#).

Summary Findings by GFAN:

GFAN found that most of the author's findings are false. Contrary to their pronouncement, the authors did NOT calculate JBS-specific GHG emissions, neither in 2021, nor in 2016. Furthermore, the assumptions the authors made for calculating 2021 emissions are unrealistic and exaggerated. Therefore, the additional claim that JBS alone would have higher emissions than Italy is also false. Finally, the authors claim that they calculated the emissions with the same methodology in 2016 and in 2021. This claim is also false. On the contrary, the purported rise of 51% is mostly a statistical artefact resulting from a change of methodology in assessing 2016 and 2021 emissions. If the authors had used the same methodology in 2021 as in 2016, they would have found a decrease in emissions.

¹ <https://www.iatp.org/media-brief-jbs-increases-emissions-51-percent>

* The quote in the header of this paper is sourced from here:
<https://quoteinvestigator.com/2014/07/13/truth/#:~:text=%E2%80%9CA%20lie%20can%20travel%20around,b oots.%E2%80%9D%E2%80%94Mark%20Twin.>



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1st Flaw – Authors Estimate the Number of JBS Slaughtered Animals Wrongly in 2021

Calculating JBS-specific emissions would require knowledge of the number of animals which JBS has slaughtered in any given year. However, JBS does not publish such numbers. The authors instead provide their own 2021 estimate of the number of slaughtered animals at JBS based on the production capacities of the slaughter houses as published in the *JBS (2022) Institutional Presentation including 4Q21 and 2021 Results*.² This JBS presentation does not clarify whether the mentioned figures are capacities or actual number of slaughtered animals. For cattle (which accounts for 82% of the purported total emissions, the other 18% being pork and chicken), the authors assumed a “conservatively estimated” 97% utilization rate, on a total slaughter capacity per day of 76,150 head, for a total of 26.78 million head per year. The authors did not indicate whether they contacted JBS directly in order to receive more accurate numbers. The authors also did not disclose whether or which kind of plausibility checks they made for their estimations.

97% is not a conservative estimate of a slaughter house utilization rate. It is instead an unrealistic estimate. The industry-wide standard utilization rate is around 90%, as any internet search will reveal.³

2nd Flaw – Authors Apply Different Estimation Methodology in 2021 and in 2016

The 2016 estimate for the number of slaughtered animals was done by a different author at a different organization, called GRAIN, and published in 2018. The Grain author recorded a total JBS cattle slaughter capacity per day of 79,700 head. Thus, capacity would have been reduced by 3.7% between 2016 and 2021. The 2016 author did not disclose his assumptions and calculations for estimating actual slaughter numbers. However, the 2016 author assumed an annual slaughter of 17.40 million, implying a utilization rate of 60%.

Therefore, in essence, the purported rise of 51% more JBS GHG emissions between 2016 and 2021 stems almost entirely from what appear to be different assumptions about the JBS utilization rate of its production network in 2016 and 2021. It is only this change in statistical methodology which accounts for the purported rise of JBS emissions.

² <https://api.mziq.com/mzfilemanager/v2/d/043a77e1-0127-4502-bc5b-21427b991b22/89617df2-cf31-77d8-d102-c2dee83873fb?origin=1>

³ <https://www.drovers.com/news/industry/nalivka-economics-capacity-and-utilization>



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3rd Flaw – Authors Do Not Calculate JBS-specific GHG Emissions

The authors state that they applied the same UN approved FAO GLEAM methodology to convert the number of slaughtered animals per year into a number of Scope 1,2 and 3 GHG emissions related to these animals for both 2016 and 2021. That is not correct. The methodology used by the authors does not attempt to calculate JBS-specific emission rates per kilogram of carcass weight production, which GLEAM would have required them to do, and therefore the claims about JBS-specific emissions are false. The author’s methodology assumes emission rates per kilogram of carcass weight that apply as an average for respectively the regions of all of Latin America/Caribbean or all of North America or all of Oceania. The only JBS-specificity is derived by proportionally dividing up the total production capacity across these three different regions and then apply region-specific values to them. However, that is not a sufficient degree of specificity to call the result to be JBS-specific.

Moreover, those emission rates are based for both 2016 and 2021 on the year 2010. The same also applies to the characteristic of the JBS slaughtered herd in terms of herd structure, cattle weight or dressing percentages, which are also just regional values, and not company specific values. Thus, the authors do not make any accommodations whether the JBS slaughtered herd may have different production conditions from the respectively average Latin American cattle, or average North American cattle or average Oceanic cattle. Moreover, the authors do not make any accommodations for changes in those production conditions between the years 2016 and 2021. Instead, all emission factors are based on 2010. In other words, the authors make an estimate of JBS emissions, based on the assumption that JBS produces exactly as the respective averages of all Latin American, North American or Oceanic producers as per 2010.

JBS-specific production conditions might not be publicly known. In such a case, the model may have wished to allow for such differences, by making assumptions based on published data, and incorporate them accordingly in the calculations. However, that effort was not undertaken. Therefore, it is not correct to claim that *“JBS increases its emissions by...”*, if the methodology does not attempt to differentiate between potentially differing production conditions of the company specific herds to the regional averages, and does not adjust for the different time periods.

4th Flaw – Authors Apply a too High GWP factor

The authors used a GWP equivalency value of 34 for converting methane emissions into CO2 equivalents. The most recent GWP value of IPCC AR 6 is 27.1, which would have yielded roughly 20% lower absolute emission values, and which would have been more correct when claiming to be using the most recent UN approved methodologies.