



EDITORIAL NOTE

A brief assessment of the influence of Animal Science in the Impact Factor of the AABC

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Although the importance that has been given to a journal's Impact Factor (IF) has been questioned for some time (e.g., Kaldas et al. 2021), including exposing several problematic situations (e.g., Siler & Larivière 2022), the fact is that this index is firmly established among researchers (e.g., Bradshaw & Brook 2016), affecting the entire publication industry.

As the sole broad multidisciplinary periodical edited in Brazil, the Annals of the Brazilian Academy of Sciences (AABC, Kellner 2023) is well aware of the problems of how the IF affects different areas of science. For this reason, changes were introduced in order to develop specific fields that might contribute to improving bibliometric indexes of the journal. One such change was the division of some broader areas into more specific fields, in an attempt to attract the interest of researchers (e.g., Kellner 2022). Among these is Agrarian Sciences, which was subdivided into four areas: Animal Science (AnSci), Crop Science (CrSci), Soil Science (SoiSci), and Forestry Science (FoSci). By far, most manuscripts received since this change was implemented (2021), fall under AnSci. Here I make a brief assessment of the contribution to the Impact Factor for 2023 of the AABC (AABC IF-2023) recently disclosed (Clarivate 2024) considering the articles allocated to AnSci.

According to Clarivate (2024), a total of 848 citable items were published in 2021 and 2022, a number that is at odds with the actual quantity of articles (863 – excluding editorials, letters, and forewords) that the AABC published in this period. This indicates that 15 papers were not considered in the calculation of the AABC JCR-2023. The missing article problem (MAP) is unfortunately not new for the AABC (e.g., Kellner 2020), and apparently has been repeated this year (Kellner in prep.).

In 2021, the AABC published 424 papers, 34 (8%) of which covering AnSci. In the following year (2022), this number showed a considerable increase, with 63 (14.4%) of the 439 published papers referring to this field. Of the 34 published manuscripts in 2021, only 33 were retrieved by the JCR-2023. The article by Felix & Freitas (2021) was not included for unknown reasons and is another example of MAP. All 63 articles published in 2022 were found in the JCR-2023, resulting in a total of 96 papers in AnSci that were considered by the calculation of the AABC IF-2023 (Table I). Based on the information presented in the JCR-2023, AnSci contributed with 11.32% of the total number of papers published by the AABC in this two-year period.

Of the 96 papers considered here, 45 (21 from 2021 + 24 from 2022) were cited at least once and 16 (8 from 2021 + 8 from 2022) at least twice in 2023, resulting in an Article Citation Factor (ACF – see Kellner 2020) of 0.4688 and 0.1667, respectively (Table I). This means that 41 (12 from 2021 + 39 from

Table I. Citations and indexes referring to Animal Science (AnSci) articles published in 2021 and 2022 by the Annals of the Brazilian Academy of Sciences that were considered in the 2023 Impact Factor.

AnSci 2021*	33
AnSci 2022	63
AnSci 2021-2022*	96
Cit Art ₁ 2021/2023	21
Cit Art ₂ 2021/2023	08
Cit Art ₁ 2022/2023	24
Cit Art ₂ 2022/2023	08
Cit 2021/2023	39
Cit 2022/2023	93
Cit 2022/2023**	35
Cit 2021-2022/2023	132
Cit 2021-2022/2023**	74
Cit MCAr 2021-2023	06-05-03
Cit MCAr 2022-2023	58-05-03
ACF ₁ 2021-2022/2023	0.4688
ACF ₂ 2021-2022/2023	0.1667
AABC IF-2023	1.1
AnSci IF-2023	1.3750
AnSci IF-2023**	0.7789
RAIF ₁ 2021-2022/2023	2.933
RAIF ₁ 2021-2022/2023**	1.6818
RAIF ₂ 2021-2022/2023	6.4375
RAIF ₂ 2021-2022/2023**	3.000

Abbreviations:

AABC IF-2023 – Impact factor of AABC relative to the year 2023 released in 2024 by the JCR;

ACF₁2021-2022/2023 – Article Citation Factor of articles on Animal Science (AnSci) published in AABC during 2021 and 2022 cited at least once in 2023;

ACF₂2021-2022/2023 – Article Citation Factor of articles on Animal Science (AnSci) published in AABC during 2021 and 2022 cited at least twice in 2023;

AnSci 2021 – number of articles on Animal Science (AnSci) published in AABC during 2021;

AnSci 2022 – number of articles on Animal Science (AnSci) published in AABC during 2022;

AnSci 2021-2022 – total number of articles published on Animal Science (AnSci) published in 2021 and 2022;

AnSci IF-2023 – Impact Factor of 2023 considering articles on Animal Science (AnSci) published in AABC during 2021 and 2022;

Cit 2021/2023- number of citations in 2023 of articles on Animal Science (AnSci) published in AABC during 2021;

Cit 2022/2023- number of citations in 2023 of articles on Animal Science (AnSci) published in AABC during 2022;

Cit 2021-2022/2023 number of citations in 2023 of articles on Animal Science (AnSci) published in AABC during 2021 and 2022;

Cit Art₁2021/2023 – number of articles on Animal Science (AnSci) published in AABC during 2021 cited at least once in 2023;

Cit Art₂2021/2023 – number of articles on Animal Science (AnSci) published in AABC during 2021 cited at least twice in 2023;

Cit Art₁2022/2023 – number of articles on Animal Science (AnSci) published in AABC during 2022 cited at least once in 2023;

Cit Art₂2022/2023 – number of articles on Animal Science (AnSci) published in AABC during 2022 cited at least twice in 2023;

Cit MCAr 2021/2023 – number of citations in 2023 of the three most cited articles on Animal Science (AnSci) published in AABC during 2021;

Cit MCAr 2022/2023 – number of citations in 2023 of the three most cited articles on Animal Science (AnSci) published in AABC during 2022;

RAIF₁2021-2022/2023 – Reescalated Article Impact Factor of articles on Animal Science (AnSci) published in AABC during 2021 and 2022 cited in 2023;

RAIF₂2021-2022/2023 – Reescalated Article Impact Factor of on Animal Science (AnSci) published in AABC during 2021 and 2022 cited at least twice in 2023.

*Excluding one article published in 2021 but not retrieved by the JCR-2023;

**excluding the most cited article.

2022) did not get any citation in 2023 and therefore did not contribute positively to the AABC IF-2023. Only 16 out of 96 published papers were cited twice in 2023.

When analyzed more closely, most papers without citations focus on animal production (also referred to as Zootechnics). Those with more citations tend to be broader contributions, including biogeography and aspects dealing with endangered animals.

As pointed out, the AABC IF-2023 is 1.1. If only AnSci contributions would be considered, the IF would be 1.370, which is comparatively higher than expected for the low number of articles that were cited (expressed by the ACF). One paper, however, stands out in the number of citations and was, according to the JCR-2023, the most cited article published by the AABC in the two years under analysis: Morrone et al (2022) was cited 58 times, and is clearly an outlier. If this article is excluded, AnSci IF-2023 would be much lower (0.7789) than the AABC IF-2023. More comparative data is presented in Table I.

The take home message from this brief analysis is that there is much room for improvement regarding AnSci relative to the AABC IF.

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