

# **Trends and Global Contributions in Dairy Science Literature (2010–2025): A Bibliometric Analysis**

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## **Abstract:**

The proposed paper presents an all-inclusive bibliometric analysis of international dairy science research conducted between 2010 and 2025, aiming to shed light on publishing trends, research directions, key players, and funding dynamics. A search of the Scopus database on July 24, 2025, using the precise phrase "dairy science" as the title, abstract, and in the field of keywords, was employed as the study's methodology. This search retrieved 3,685 publications within the selected timeframe. The data included publication year, source titles, document types, subject areas, countries of publication, author affiliations, and funding agencies alongside descriptive bibliometric indicators and statistical summaries in Microsoft Excel. The results of the study reflect that there is a spike in book releases between the period of 2011 and 2013, after which the number has been declining, but has started rising in the past two years. This has been coupled with the strong journal centrality, where 95% of the publications are published in the Journal of Dairy Science. Agricultural and Biological Sciences was the biggest research area to be found, and the US, China, and Brazil as the top countries in the research output. The funding discussion brought to the fore the importance of major agricultural research organisations, including national and international scientific foundations. The paper claims to be original and worthwhile because it gives a long-term analysis of the statistics of the sequence of the literature in dairy science over 16 years. It is presented as a resource that can be of value to research planning, development of collaborative projects, and development of research policy within the dairy science disciplines by building a mapping resource of publication conduct and key players within the research realm.

*Keywords: Dairy Science, Bibliometric Study, Scopus, Scientific Productivity*

## **1.0 Introduction:**

Dairy science is a very important field in the sphere of agricultural and biological sciences, focused on the equity and health of dairy animals as well as milk production, reproduction, and sustainable dairy production. With the rising population clusters and a change in the food habits in the world, the consumption of milk products and milk-producing products has grown, therefore giving way to a surge in research. Production of scientific information in the realm of dairy science is broad and covers various fields of study such as genetics, nutrition, veterinary science, and environmental sustainability (Faye & Konuspayeva, 2012; Sánchez-Macías et al., 2022).

The trends and origins of this expanding corpus of literature can be of great importance in informing research investment, policy and institutional cooperation.

Bibliometric analysis can be defined as a systematic way to access large amounts of academic data based on such indicators as publication output, primary focus, academic institution, and geography. It can particularly help in seeing the trends in research output, in assessing the performance of nations and institutions, and in monitoring the development of subject areas (Archambault et al., 2009; Xu et al., 2022). Though other bibliometrics publications have already devoted their attention to particular themes in the field of agriculture or veterinary science (e.g., precision livestock farming or antimicrobial use in dairy production) there is a gap in a more unified approach to the problem of research development in dairy science over several years, as well as the geographic reach of the research in the world in general (Abdusalomova et al., 2024).

This study fills this void by looking at 3,685 dairy science publications listed in the Scopus database between 2010 and 2025. It provides a statistical review of publication trends in a year, including journal sources, document types, subject areas, and funding trends. It also identifies the leading nations, authors, and research centres that contribute to the global dairy science literature. The results provide a handy reference in terms of the organisation and evolution of the field, which can be used by people conducting a study of the dairy-related scientific research, along with extending to researchers, universities, and policymakers.

## **2.0 Objectives**

The main research aim is to conduct an all-inclusive bibliometric analysis of international publication activity in dairy sciences over the next 15 years (2010-2025). The research seeks to determine publication trends, assess the productivity of authors, institutions and countries and thematic fields of inquiry. The targeted specific objectives are as follows:

- To examine the distribution of publications in dairy science per year during 2010-2025 and define times when the most significant decreases in research activity took place.
- To determine the most territorial journals, types of documents, and areas of study that lead the academic production in this field.
- To analyse how different countries, authors, and research institutions contribute to the worldwide spread of the literature of dairy science.
- To determine the importance of funding agencies in facilitating dairy-related research, and to investigate their comparative contributions to publication output.

## **3.0 Literature Review**

Bibliometric tools have experienced increased popularity as a method of mapping research landscapes in agricultural sciences. To give an example, Salmeron Manzano and Manzano Agugliaro (2021) have done a worldwide bibliometric state-of-the-art review of agronomy literature through Scopus, pointing out research

topics changing over time, major journals, and country collaborations (Salmeron Manzano & Manzano Agugliaro, 2021). Equally, the Carmo Filho and Ribas (2024) review used published patterns over 10 years (2013-2023) to discuss the process of intensification and sustainability of agricultural productive systems, geographical leadership, and evolution of trending keywords (Carmo Filho & Ribas, 2024). Such works exemplify that Bibliometrics, such as the visualisation tool VOSviewer, can provide valuable information on research dynamics in related fields of Agriculture.

Nevertheless, there are few bibliometric studies in dairy science. Among the few exceptions, one can single out the Scopus-based analysis of antimicrobials in dairy products throughout 2013-2022, which involved such topics as the journal impact, authors, countries, and word clustering (Abdusalomova et al., 2024). Nevertheless, comprehensive bibliometric research that explores more extended and long-term trends (i.e., the overall output of research, subject area, institutions, and funding sources) up to 2025 has not been made yet. In this way, this paper is an improvement of this gap because it aims at mentioning the global dairy science literature adoption on a more comprehensive and up-to-date level with a focus on trends of evolution, multidisciplinary distribution, and institutionalisation.

The fixity in conventional bibliometric production in the field of dairy research has been rich in research areas of specialised interest, such as the sustainability of the research, animal health or precision farming. One of the few exceptions is the analysis conducted by Serin, Cengiz, and Gunlu (2025) based on the Web of Science, which tracked the trends of dairy farming sustainability worldwide between 1992 and 2025. In our research, 410 works were analysed, and the paper established that the scientific production was on the rise, particularly after 2017, and the greatest contributors were the studies of the United States, Italy and the Netherlands (Serin et al., 2025). It also identified the key themes in the environment, sustainability, economic stability, and animal welfare research, along with the unreported and the geographic variations in the literature.

Although the reflections of the sustainability-oriented literature search have been fruitful, the bibliometric research in dairy science is scanty, especially concerning the overall publishing tendency, thematic bias beyond sustainability, and resources/foundation contributions. This current study aims to address this gap by developing a trend across the years of 2010 to 2025, including the trending of subject topics, document types, journals' prominence, and overall contributions to dairy science by all nations, thereby giving a review of the changing body of dairy science literature.

#### **4.0 Methodology**

This study has relied on the bibliometric methodology in order to conduct this kind of research. The information employed was retrieved in Scopus, a database containing peer-reviewed literature with an extensive global coverage that covers over 21.000 journals in different disciplines.

The phrase search occurred by keying in the keyword Dairy Science in quotation marks to identify the documents that contain the phrase. A review of the title, abstract, with keywords was done and on 24<sup>th</sup> July 2025, it produced 3,685 published articles between 2010 and 2025.

Bibliographic metadata contained such information as year of publication, name of source (journal), type of document, subject area, names of authors, their institutions and country of location and funds providing them. Data has been exported to a CSV file and Microsoft Excel has been used to carry out statistical summaries. This study examined exclusively descriptive and productivity-related indicators; noteworthy is that network visualisations, citation data and co-author relationship dynamics deserve dedicated discussion.

No limitations were made on the language of the documents, and all types of documents were examined. The plan gives a clear graphical presentation of the trend of productivity and international participation in dairy science research in the last 16 years.

## **5.0 Analysis of Research Literature on Dairy Science**

### **5.1 Document Analysis by Sources**

The source title analysis of documents shows that the scholarly output is excessively skewed towards one journal. There are a total of 3,685 documents, out of which the Journal of Dairy Science alone provides 3,504 documents, thus making up 95.08% of the total. This indeed makes it the best and most powerful journal in the field of dairy and animal science research.

After this, some of the journals add a minute proportion of the overall contribution. There are 0.16% of the documents published in Cogent Food and Agriculture and Dairy Science and Technology, 0.14% in Animals and 0.14% in Journal of Animal Science. Smaller contributions are made to the International Journal of Dairy Technology and JDS Communications, each with four documents (0.10%).

Journals that provided three documents each (0.08%) were Animal Production Science, Asian Journal of Dairy and Food Research, Food Bioscience, International Dairy Journal, IOP Conference Series: Earth and Environmental Science, Pathogens and Tropical Animal Health and Production.

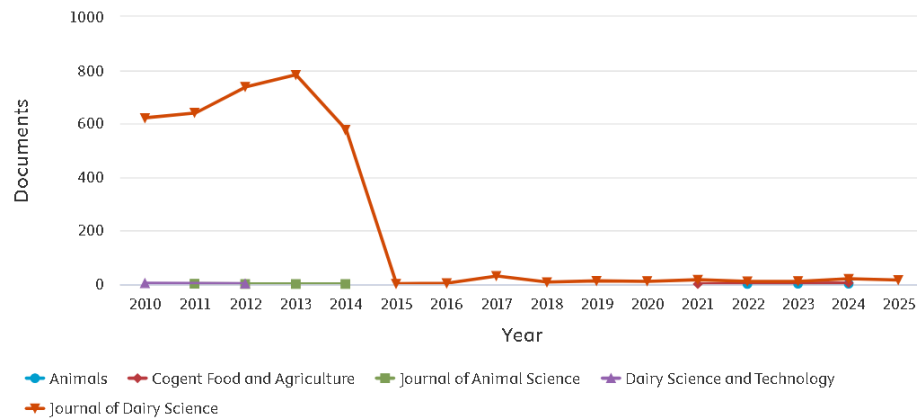
There was a group of sources with two documents (0.05%) each, namely Animal, Annals of Applied Statistics, Assiut Veterinary Medical Journal Egypt, Food Chemistry, Information Switzerland, Irish Veterinary Journal, Journal of Dairy Research, and others.

The rest of the 57 journals had 1 document each, or 1.54% of the total share combined. These consist of a great variety of interdisciplinary and niche journals across veterinary science, food science, environmental science, and social science, each contributing 0.03% to the overall output.

Based on this distribution, it is evident that there is a high concentration of research in this area, with the Journal of Dairy Science serving as the leading publication outlet. The remaining sources have a peripheral but varied importance as they represent interdisciplinary research, but to a much lesser extent.

## Documents per year by source

Compare the document counts for up to 10 sources.

[Compare sources and view CiteScore, SJR, and SNIP data](#)

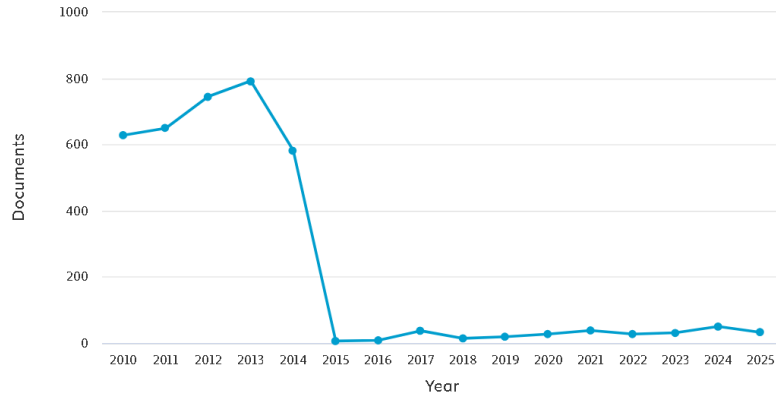
**Figure 1 Document Analysis by Sources**

### 5.2 Document Trends by Year

The comparison of the document distribution by the year allows for determining important tendencies of research productivity over time. In the period 2010-2025, 3,685 documents were published. The statistics have revealed that the highest number of scholarly contributions was between the years 2011 and 2014, with 2013 being the most fertile year (792 documents, 21.49%). They are followed by 2012 with 745 documents (20.21%), 2011 with 649 documents (17.61%), and 2010 with 628 documents (17.04%). Cumulatively, the four years contributed to more than 60% of the total publications, indicating a significant increase in research output in this area.

It dipped a bit to 582 publications (15.79%) in the year 2014, but remained among the most productive years. Nonetheless, since 2014, the number of published documents has declined significantly. There was a significant drop to 6 in 2015 (0.16%) and 8 in 2016 (0.22%), indicating a considerable decline in the speed at which research was being disseminated or indexed during these years.

Despite the fluctuating publication trends, the dairy science research community has shown resilience. The slight recovery that began in 2017 with 37 documents (1.00 %) is a testament to this resilience. The figures, though relatively small until 2017, have shown a constant succession since 2018. In 2018, 2019, 2020, and 2022, we saw 14 (0.38%), 19 (0.52%), 27 (0.73%), and 27 (0.73%) documents, respectively. The last years, 2021 (38, or 1.03%), 2023 (31, or 0.84%), 2024 (50, or 1.36%), and 2025 (to the end of the analysis period) (32, or 0.87%), indicate a stable but decreasing number of studies.



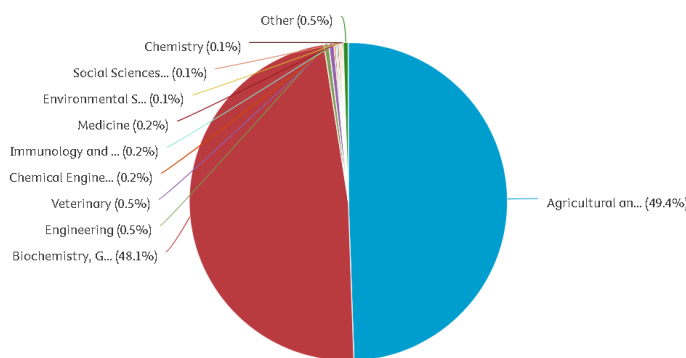
**Figure 2 Document Trends by Year**

The distribution of publications is indicative of a potential shift in the dairy science research landscape. While the early 2010s saw a very productive period for the subject, after 2015, its output has dropped dramatically. However, the modest rise over the past few years can be seen as a positive sign. It could be an indication of new interest or improvement in information gathering and archiving, hinting at a promising future for dairy science research.

### 5.3 Documents by Subject Area

Subject-wise review shows that a significant part of the documents belongs to the two most popular subjects: Agricultural and Biological Sciences and Biochemistry, Genetics and Molecular Biology. Of the total 7,462 subject area entries (as there can be multiple subject classifications to a given document), Agricultural and Biological Sciences has 3,638 entries (48.76%), followed almost immediately by the entry 3,538 (47.43%) of Biochemistry, Genetics and Molecular Biology. It shows a powerful research direction in the fields of agriculture, animal science and biochemical processes in each.

Documents by subject area



**Figure 3 Documents by Subject Area**

The other subject areas are marginal by comparison. There are 37 entries (0.50%) in both areas, Engineering and Veterinary Science, which means the areas of related technology and animal health are being investigated.

Disciplines such as Chemical Engineering, Immunology, and Microbiology contribute the same number of 13 entries (0.17%), and the same can be said about Medicine (12; 0.16%) and Environmental Science (11; 0.15%). There are a small number of entries in Social and Natural Sciences, Social Sciences, and Computer Science, with 11, 9, and 9 entries, respectively (0.15%, 0.12%, and 0.12%). Additionally, Chemistry has nine entries (0.12%). The interdisciplinary extensions are also seen in the Earth and Planetary Sciences (5 entries; 0.07%), Mathematics (4; 0.05%) and Multidisciplinary and Nursing (3 each; 0.04%).

Arts and Humanities, Decision Sciences, Health Professions, Materials Science, and Physics and Astronomy (all with two entries; 0.03%) and Business, Economics, Energy, and Pharmacology (all with one entry; 0.01%) comprise the long tail at the end of the subject area distribution.

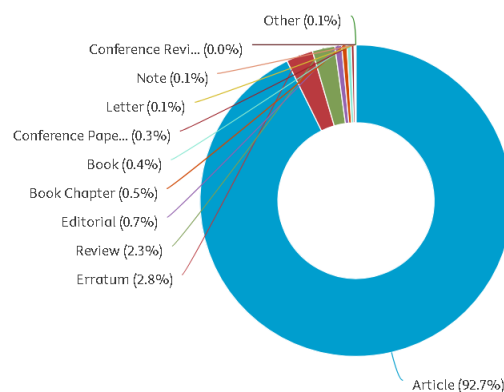
This information affirms that studies in this field are burgeoning in agricultural sciences and biological sciences, as well as biochemical studies. However, the inclusion of smaller contributions from a broad range of areas shows the cross-relations and applicability of the key research topics to different spheres. This interdisciplinary nature of the research not only broadens the scope of the field but also opens up exciting opportunities for collaboration and innovation.

#### 5.4 Documents by Type

The type of document analysis reveals that original research articles predominate, accounting for 92.7% of all output, with a total of 3,416 documents out of 3,685. It is an evident indication that most scholarly communications in the disciplinary area are empirical research and data-based studies, which are typical characteristics of scientific disciplines like agricultural and dairy sciences.

Corrections of inaccuracies in articles that have already been published, such as errata, amount to 103 documents (2.79%) and indicate extensive editorial control and interest in preserving the integrity of the published literature. Next, there are review articles (86 publications, 2.33%), which show that the attempt to synthesise and critically examine previous studies is significant and helps to contribute to theory and further research.

Documents by type

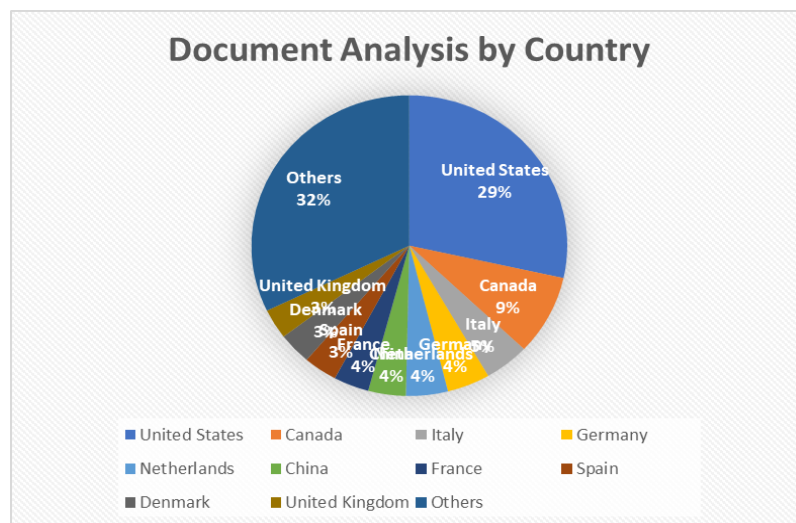


**Figure 4 Documents by Type**

Other significant ones are editorials (26 documents; 0.70%), book chapters (20 documents; 0.54%), and books (16 documents; 0.43%), although some contributions reflect on scholarly discussions and broad-based scholarly literature. The contributions in conference papers are 11 documents (0.29 %), reflecting a minimal yet existing interest in conference-based dissemination. The rest of the document types--letters (2; 0.05%), notes (2; 0.05%), conference reviews (1; 0.03%), data papers (1; 0.03%), short surveys (1; 0.03%) are minimal, though they show occasional diversification in publication forms. In total, this distribution proves that the field is characterised by a focus on research, along with a slight, yet significant, presence of other types of supporting literature that contribute to the correction of knowledge, summarising it, and exchanging it in other forms.

### 5.5 Documents Analysis by Country

Our examination of country-wise contributions reveals a truly global effort in dairy and allied scientific research. The United States leads with 1,420 publications, representing approximately 38.56 % of the 3,685 publications. Canada follows closely with 430 publications (11.68%), demonstrating a high research performance in North America. European nations also play pivotal roles in the list with Italian (229; 6.22), German (219; 5.95), Netherlands (214; 5.81), French (181; 4.91), Spain (172; 4.67), Denmark (169; 4.59) and the United Kingdom (161; 4.37) among the most significant contributors. Such numbers indicate a healthy research culture in Europe. Asia, represented by China (192; 5.21%), and other countries such as Australia (129; 3.50%), Ireland (126; 3.42%), and New Zealand (124; 3.37%), also make significant contributions. Brazil, as the top-ranking Latin American country, adds 118 publications (3.20%) to the global research landscape.



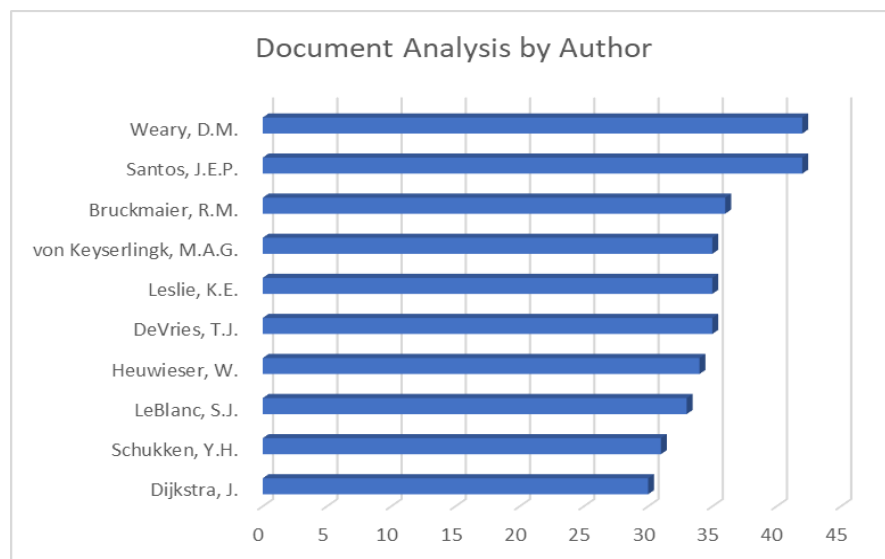
**Figure 5 Documents Analysis by Country**

India has a contribution of 30 publications but a relative contribution of 0.81, indicating low visibility or indexing compared to the other countries in the specified data set. This could be attributed to a lower presence in high-impact journals or a language barrier. Moderate participation is evident in countries such as Japan (65; 1.77%), South Korea (42; 1.14%), Turkey (46; 1.25%), Sweden (78; 2.12%), as well as Switzerland (95; 2.58%),

and exhibits consistent academic output. While more than 70 nations have each contributed fewer than 10 documents, often only 1 or 2 different publications, they collectively make up less than 5% of the total. These developing countries in Africa, South America, Asia, and other smaller European economies, such as Bangladesh, Sri Lanka, Pakistan, Kenya, Nigeria, and Uganda, among others, represent a potential for growth and diversity in the field of dairy science. This information highlights that research in dairy science and related fields is highly concentrated in the developed world, primarily in North America and Western Europe, with contributions from developing countries remaining relatively scarce. This has implications for global research collaboration, funding equity, and the representation of region-specific agricultural challenges in the global literature. This impacts the context of global research collaboration, equity in funding and representation of region-specific agricultural problems in the global literature.

### 5.6 Documents by Author

The document analysis of the author serves as a way of recognising the top publishers of scholarly works in the discipline of dairy science and allied fields. The two most prolific of them are Santos, J.E.P. and Weary, D.M., with 42 publications each, representing about 1.14 % of the total of 3,685 publications. Their research, which primarily focuses on [specific research areas], has been consistently high throughout the years, influencing the development of the discipline. Bruckmaier, R.M., who has 36 publications (0.98%), followed by DeVries, T.J., Leslie, K.E., and von Keyserlingk, M.A.G., with 35 publications (0.95%). Their contribution is significant, especially in the area of animal welfare, dairy production systems, and management practices.



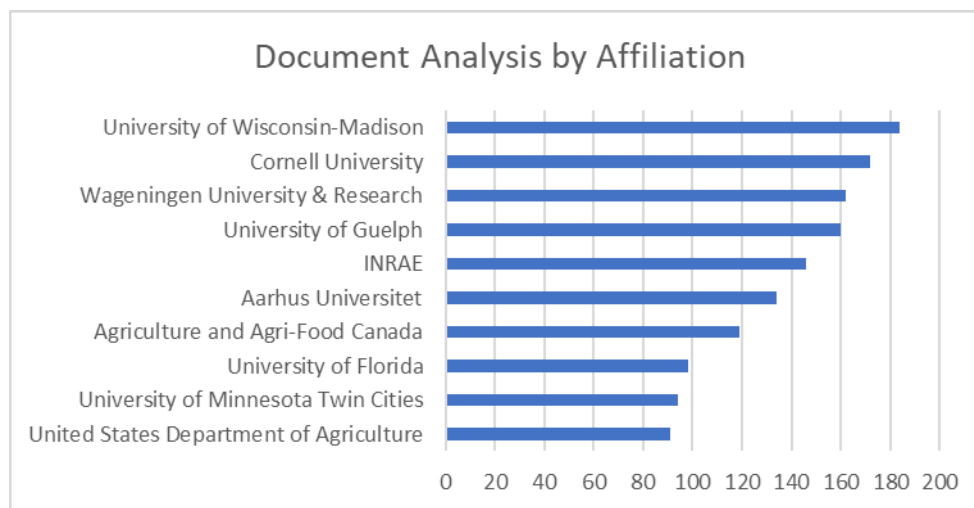
**Figure 6 Documents by Author**

Heuwieser, W., brought in 34 publications (0.92%), and LeBlanc, S.J. is next with 33 (0.90%), which is evidence of their ongoing active participation in the field of clinical and herd health studies. Completing the top ten authors are Schukken, Y.H., who had 31 articles (0.84%) and Dijkstra, J., who had 30 articles (0.81%). These ten authors

have collectively produced 353 publications; the latter constitutes 9.59 % of all reviewed documents. Their academic introductions shed light on their academic output, whereby the productivity was concentrated among a small group of academic writers concerning the importance of their contribution in the construction of global discourse and practice in the dairy science field.

### 5.7 Documents by Affiliation

The review of the most successful institutions reveals the predominant influence of academic and governmental organisations in dairy-associated research. University of Wisconsin-Madison leads the list, publishing 184 documents, which equates to roughly 4.99 % of the total number of 3685 documents. Cornell University takes second place with 172 publications (4.66%), and Wageningen University & Research added 162 (4.39%). University of Guelph printed 160 articles (4.34%), and INRAE (French National Research Institute - Agriculture, Food and Environment) published 146 articles (3.96%). Danish: Aarhus Universitet, Denmark, had 134 (3.63%), and Agriculture and Agri-Food Canada, 119 (3.23%). The University of Florida and the University of Minnesota Twin Cities generated 98 (2.66%) and 94 (2.55%) documents, respectively. Other contributors included the United States Department of Agriculture, which contributed 91 published works or 2.47 % of all books. The concentration of scholarly activity in a few leading centres of excellence in dairy research is evident, as these ten institutions collectively generate 1364 documents out of the total of 3658, which is 37.01% of the total number.

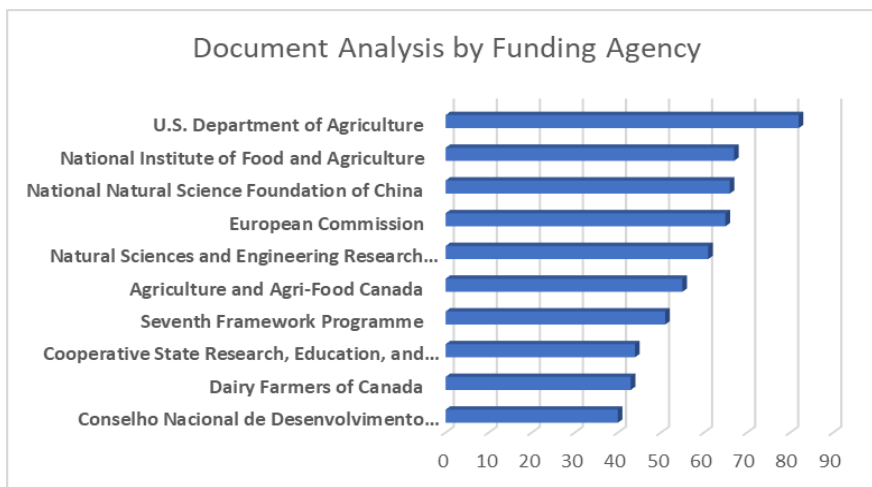


*Figure 7 Documents by Affiliation*

### 5.8 Documents by top Funding Agencies

Having analysed the funding agencies that provided financial support to research in the field, it is evident that well-known national and international research agencies fund numerous projects. The U.S. Department of Agriculture was the most significant funding body, with 82 publications contributing to about 2.22 % of the total documents. This funding has played a crucial role in shaping the research landscape, particularly in [specific research areas]. This was preceded by the National Institute of Food and Agriculture, which had 67 documents

(1.81%), and the National Natural Science Foundation of China, with 66 documents (1.79%). The European Commission financed 65 documents (1.76%), and the Natural Sciences and Engineering Research Council of Canada financed 61 publications (1.65%). Agriculture and Agri-Food Canada, the Seventh Framework Programme and the Cooperative State Research, Education, and Extension Service follow in ranks (55 documents, 1.49% each, 51 documents, 1.38%), whereas the Canadian Space Agency is ranked last (42 documents, 1.13%). Forty-three documents (1.16%) were funded by Dairy Farmers of Canada, and 40 works (1.08%) by the Conselho Nacional de Desenvolvimento Científico e Tecnológico of Brazil. The total number of publications funded by the top ten funding agencies combined was 574 of all 3685 publications, which is approximately 15.57 % of the total scholarly publications. This highlights the importance of such organisations in fostering and maintaining scientific research in the agricultural sector and other related fields of study.



*Figure 8 Documents by Top Funding Agencies*

## 6.0 Key Findings

The study of 3,685 articles indexed in Scopus between 2010 and 2025 provides significant information on the development and location of dairy science publications. The patterns in this study reflect larger changes in agricultural research. In a bibliometric review that Çelik (2024) conducted on the theme of animal production and climate change, it was observed that scientific publications on the theme have been broadly growing by a substantial margin over the last 20 years due to the impacts that the global sustainability agenda and policy-driven research funding systems have fostered. Similarly, this study has found that the publication rates of dairy science have been higher in 2011-2013 than later, suggesting a shift in prioritisation either on the funding or publications side.

One of the most dramatic findings is the Journal of Dairy Science's excessive dominance in publishing over 95% of all articles during the investigation. It replicates the findings of other bibliometric studies, such as Malesios & Abas (2012), which identify the journal as the most influential publication in animal and dairy sciences, as well as

the traditional and emergent bibliometric indicators. Nevertheless, the journal is the primary medium of dispersion of research on milk production and animal physiology, as well as herd health management.

Further, the concentration of the subject areas affirms the high numbers of core studies of agriculture and biology. This trend is in line with the findings of Marino, Petrera, and Abeni (2023), who in their bibliometric study of digital and precision technology in dairy farming reported that the following interdisciplinary themes experienced the fastest growth, namely the computer vision application used in agriculture and the use of sensor technologies and were all in the data analytics research field. The new fields, although more technical in nature, have classical dairy science backgrounds, such as biochemistry and animal nutrition, which remain well represented in the data in the present study.

Together, these results point to the ongoing consolidation of dairy science literature in a small set of journals, institutions and countries, and also the increased involvement of the field in technology and sustainability. The current paper will present a modernised statistical base to which further changes can be compared, especially when they regard interdisciplinary cooperation and adoption of technology.

### **7.0 Implications of the Study**

A comprehensive analysis of 3,685 publications in dairy science (2010-2025), acquired by Scopus, is also a significant addition to the work of researchers, funding grantors, and policy makers of the current analysis. First of all, the study can provide tangible steps to promoting regional entry and stimulating underrepresented disciplines by defining common trends in research output, disciplines, and publications, respectively, thus integrating them into the process. It is possible since comparable bibliometric studies of agricultural financing state that a resource allocation and service provision based on such evidence-based mapping is significant in directing a more strategic investment of funding in the development of more inclusive funding policies (Grecu et al., 2025).

Second, the fact that such intense concentration of literature in relatively few journals and institutions has occurred also argues that it is necessary to secure more global representation. This is in line with bibliographic research in agroecology, where bibliometric representation has facilitated the growth of research connections and policy acceptance in developing countries (Mwirigi et al., 2024). Policymakers and other institutions can subsequently use these findings to identify areas of weakness, find synergies, and invest in new centres of dairy science research in different parts of the world.

Third, the document type and subject area should be within a narrow range. Access and utilisation provide a strong indication that they were likely able to extend into interdisciplinary arenas. Practical experience in the field of agribusiness studies shows that the importance and effectiveness of agricultural research can be increased with the involvement of the themes of digital technologies and climate resilience (Mwirigi et al., 2024). Understanding these inconsistencies, stakeholders can assist in establishing new research connections between dairy science and sustainable development, as well as animal science and technology.

Altogether, the implication of this study emphasises the strategic implications of the bibliometric evidence in informing institutional and national decision-making. The analysis provides a resource-rich benchmark of where world dairy science scholarship is focused and where it is weak, providing a new source of analysis for future bibliometric monitoring, research funding decisions and global capacity-building interventions.

## **8.0 Conclusion**

The global dairy market is undergoing a transitional period, driven by increasing consumer demand and shifting nutritional values and research findings in livestock and food technology. The current work is a bibliometric research study on global research trends in dairy science, based on 3,685 publications in the Scopus database from 2010 to 2025. Using a phrase search for "Dairy Science," the analysis identifies patterns in publication growth, subject area distribution, contributing countries, institutional affiliations, funding agencies, and key journals. The findings show a high number of scholarly outputs between the years 2010 and 2013, followed by a period of reduction and a slight rebound. *Journal of Dairy Science* became the most recognised source that contributed to more than 95 % of publications. The majority of the documents were under Agricultural and Biological Sciences and Biochemistry. The United States published the most, and was followed by China and India. The large number of universities and research organisations was also the source of concentration of institutional productivity. The results indicated that dairy science is a highly specialised sphere with centralised publishing trends and work.

This study is an extensive bibliometric profile of dairy science research in 2010-2025, indicating its long-term development patterns, specialisation, and the role of international collaborators. The high publishing output in 2011-2014, followed by a consecutive decrease and a poor increase, reflects a shift in agricultural research interest and funding priorities (Celik, 2024). The high concentration of scholarly communication, as represented by the extreme prominence of the *Journal of Dairy Science*, suggests that the field is highly concentrated. Conversely, the outcome is indicative of no significant diversification of topics because the output is narrowed down to the highly represented areas of agriculture and biochemistry. The trends are aligned with the broader context of dairy industries, not only in the current country but also globally, which is shaping up to intensification of the industry, sustainability of the industry, and technology adoption as megatrends (Bojovic & McGregor, 2023).

At either the country or institutional level, research productivity is centered on the development areas, primarily North America and Western Europe, necessitating more diverse global participation. These types of inequalities can be found in the studies of precision livestock farming, like the recommendation to stretch the global influence with the help of collaboration and capacity development across locations (Marino, Petrera & Abeni, 2023). On this basis, the relative disciplinary and authorial homogeneity is in line with the results of more comprehensive bibliometric research in the agricultural sciences, disclosing an increase in concentration and the need to empower new actors and new institutions (Kwiek, 2023).

In general, the article introduces a new statistical starting point, which explains how and where dairy science resources are developed. The results affirm the importance of increasing journal publications, promoting diversity in topic coverage, and fostering equal international collaborations. As further investigations extend to network-based and thematic analyses, this comprehensive review forms a starting point against which more detailed bibliometric research and planning would be possible at the institution, funder and country level.

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