



Comparative Analysis of Research Output of Tamil Nadu Agricultural University as Reflected in Scopus and Web of Science

M. Sankar ^a^o* and C. Prema ^b#

^a Agricultural College and Research Institute, Tamil Nadu Agricultural University, Tiruvannamalai-606753, Tamil Nadu, India.

^b Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2023/v41i81973

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/93470>

Original Research Article

Received: 07/09/2022

Accepted: 11/11/2022

Published: 27/05/2023

ABSTRACT

The study presented in the paper has analyzed the research productivity of faculty members of Tamil Nadu Agricultural University for the period of 2001-2020. Total of 4372 publications in Scopus and 1980 publications in web of Science database were retrieved and compared the performance of the faculty members. This study analyzed the scientific parameters such as year-wise distribution of research productivity, most prolific authors, funding sponsors, Collaborating Institutions, Collaborating Countries and top-ranked sources preferred by the agricultural faculty members for publishing their research output. Tamil Nadu Agricultural University faculty members published more publications in Scopus 4372 compared to Web of Science 1980. Articles are the

^o Deputy Librarian;

Librarian;

*Corresponding author: E-mail: sankarmlib@tnau.ac.in;

predominant publications by the faculty members of Tamil Nadu Agricultural University, Coimbatore 3928 in Scopus and 1822 in Web of Science Prof. Samiyappan R is the predominant and most impactful author of Tamil Nadu Agricultural University. USA is the most predominant country collaborated with Tamil Nadu Agricultural University publications about 187 in Scopus and 137 in Web of Science Legume Research is the most predominant journal with 69 publications in Web of Science and Electronic Journal of Plant Breeding 448 publications in Scopus. Agricultural College and Research Institute, Madurai is the most collaborating institution with 538 publications in Scopus and Kansas State University in Web of Science database. Plant Sciences (499), Agronomy (490), Biotechnology Applied Microbiology (190), Horticulture (159) and Environmental Science (129) are the predominant subject areas focused by the faculty members of Tamil Nadu Agricultural University in Web of Science and Agricultural and Biological Sciences subject category in Scopus 3317 publications. Indian Council of Agricultural Research is the predominant sponsor and supported for 104 research publications followed by Department of Biotechnology, Ministry of Science and Technology, India.

Keywords: Agriculture; Tamil Nadu Agricultural University; research productivity; Scientometrics.

1. INTRODUCTION

India is an agrarian country, and agriculture makes up a significant portion of the Indian economy, accounting for over 18% of GDP. The agriculture sector in India employs over 52 percent of the country's workforce. Only because of the diligent and serious study conducted by Indian agricultural specialists was the Green Revolution possible in India. Pandit Jawaharlal Nehru, India's previous Prime Minister, emphasised the necessity of agricultural research by saying, "Everything can wait, but agriculture cannot." In India, agricultural research is critical to the country's progress. Scientific research evaluation is a complicated process that can be simplified by utilising bibliometric indicators that are based on the estimation of scientific output, which implicitly signals productivity. For decades, publication counting has been used to assess the effectiveness of research. However, the method's main restriction is that it can only track research efforts that result in written knowledge that is disseminated through established communication channels such as journals, books, and patents. Despite the method's limitations, it was thought worthwhile to investigate the nature and other distinguishing elements of scientific study in Tamil Nadu, as demonstrated by scientific publications.

1.1 Tamil Nadu Agricultural University

Agriculture is one of the important subject in the Science and the education is professional based. There are sixty three State Agricultural Universities (SAUs) available in India to offer various undergraduate and post graduate degree programmes related to agriculture. Tamil Nadu

Agricultural University is one of top ranking SAUs in India by introducing innovative ideas in teaching and research. Tamil Nadu Agricultural University (TNAU) began in 1868 by founding an Agricultural School in Saidapet, Madras, Tamil Nadu later shifted to Coimbatore. It was connected with Madras University in 1920. TNAU have responsibility to provide the agricultural education and research and research products to the State Agricultural Department. The Agricultural College and Research Institute, Coimbatore, was the only Agricultural Education Institute in South India till 1946. It was designated as a Post-graduate Centre for Master's and Doctoral degrees in 1958. Agricultural College and Research Institute, Madurai, was founded in 1965. However, the TNAU was founded in 1971, and these two colleges comprised the nucleus. Presently, Sankar & Prema [1] to studied the profile of Tamil Nadu Agricultural University, The University has 17 constituent colleges, 4 Regional research stations, 22 Agricultural research stations, 13 Horticultural research stations and 14 Krishi Vigyan Kendra (KVKs). The university mandates for each of the Station, Departments, Colleges and directorate chartered.

1.2 Web of Science

Clarivate Analytics' Web of Science is an online database and Clarivate Analytics' offering. This database is one of the information abstracting and citation databases [2-4]. In general, indices for measuring research output include the number of citations, the h index, and Total Global Citations Scores (TGCS) and Total Local Citations Scores (TLCS). Hiscite programme was used to get these parameters. It covers a wide

range of topics and gives data based on more certified materials provided by researchers.

1.3 Scopus

Scopus is a product of Elsevier, which was founded in 2004. Elsevier Publishing Group maintains the Scopus database, which is an abstracting and citations information portal. Scopus collects and distributes data based on more validated papers published by the researcher. Scopus, in other words, relies on peer-reviewed, high-impact-factor journals, books, conference proceedings, and other sources [5-7]. Scopus gives information about the researcher's h-Index, CiteScore, and SJR.

2. REVIEW OF LITERATURE

2.1 Scopus Based Researches

Arumugam & Balasubramani [8] were research carried out a quantitative and qualitative study of Kumaraguru College of Technology, Coimbatore's publication output. For the years 1997 through 2020, data was gathered from the Scopus database. The largest numbers of 404 papers were published in 2018 and 2019 among the 2110 papers published over a 24-year period. Between 2011 and 2020, 1792 papers were published, accounting for 85.3 percent of the total. With 1665 papers, journals are the most popular mode of publication. This research shows that Kumaraguru College of Technology has made significant contributions to research in Science, Engineering, and Technology, and that faculty publication output has increased significantly in recent years.

Geetha & Kothainayaki [9] measured research output of Anna University using Scopus database and the top most was given for Type of Source, Chronological growth, Subject wise contribution, Document type preferred, Collaborated Country, Collaborated Institutions, Contributed Journal, Highly contributed author, Keywords Preferred and Language of the paper. A total of 23,883 records have been identified and the same has been analyzed.

Susan, Sheeja & Cherukodan [10] analyzed the research output of Tamil Nadu universities top most ranking wise prolific authors, publications, countries and citations etc. Only 40 universities analyzed out of a total 52. The First rank position in Anna University is the top ranking university in the state with 17859

documents, Second Rank Vellore Institute of Technology (VIT) with 10646 and third rank for University of Madras with 10474. The top three universities in Tamil Nadu come under the first top 30 institutions having more documents in Scopus from India.

2.2 Institutional Based Researches

Sankar, M [11] used Web of Sciences to examine plant science research output at Tamil Nadu Agricultural University from 2000 to 2020. He reported that the TNAU scientist's research output was in the form of research papers in 2015, with the maximum number of publications output 49 (83.01%). Plant Archives was the most popular journal for submissions, accounting for 30 papers. Samiyappan R was the most prolific author, publishing 45 articles in various publications. 28 essays were written in partnership with Kansas State University. Rice was the most commonly used keyword in the plant science category (97 times).

Jayaprakash G Hugar (2019) has found the results in their study in the Web of Science Database for publication pattern, trend, and collaboration with different organizations, institutions and different nations. Top most funding agency of Goa University in last ten years. Totally 1218 articles including 497 international collaborated articles with an increasing growth rate during the study period.

Anil & Seema (2018) analyzed Research Contributions of CCS Haryana Agricultural University during the year from 2001 to 2015. The result based on the year-wise research output, subjects, national and Global contributions, top most publications of journals, most productive authors, top most using keywords, authorship, citations pattern and highly cited paper. A total of 2649 papers were published during the research period and 15282 citations.

Sankar & Prema analysed that research output for the Tamil Nadu Agricultural University period of 2001-2020 as recorded in Scopus database. Total of 4372 publications and the study carried out year-wise distribution of research productivity, most prolific authors, funding sponsors, Collaborating Institutions, Collaborating Countries and top-ranked sources preferred by the agricultural faculty members for publishing their research output.

2.3 Objectives of the Study

The primary objective of the study is to analyse the scientific research publications by the faculty members of Tamil Nadu Agricultural University, Coimbatore for the period of 2001-2020 as reflected in both Scopus and Web of Science.

- To analyze the growth pattern of Tamil Nadu Agricultural University as reflected in the Scopus and web of Science for the period 2001- 2020.
- To explore the document wise output of Tamil Nadu Agricultural University in Scopus and Web of Science database
- To understand Subject wise Research output of Tamil Nadu Agricultural University in Scopus and Web of Science database
- To find out the predominant institutions collaborated with Tamil Nadu Agricultural University in Scopus and Web of Science database
- To figure out the Sponsorship wise research output of Tamil Nadu Agricultural University
- To explain the Country wise research output of Tamil Nadu Agricultural University in Scopus and Web of Science database
- To analyze the Author wise in research output Tamil Nadu Agricultural University in Scopus and Web of Science database
- To understand the Source wise research output of Tamil Nadu Agricultural University in Scopus and Web of Science database

2.4 Scope and Limitations

The present study is limited to the 6352 research publications of Tamil Nadu Agricultural University, Coimbatore in Tamil Nadu Only. The study is limited to the publications from 2001 to 2020 which are reflected in Scopus and Web of Science Only.

3. METHODOLOGY

The Scopus and Web of Science citation databases are used as a data collection tool and extracted 4372 records in Scopus and 1980 records in Web of Science as on 30 March 2022 for the period of 2001 to 2020 with the search string "Tamil Nadu Agricultural University". The

extracted data were Histcites analyzed using Biblioshiny and VoS viewer and a comparative analysis were done with respective of the institution.

3.1 Data Analysis and Interpretation

Table 1 shows the year wise research output of Tamil Nadu Agricultural University as reflected in both Scopus and Web of Science database for the period of 2001-2020. It is clear evident that the researchers of TNAU published more publications in Scopus 4372 compared to Web of Science 1980. During 2001 -2010 there is an accountable publications with the annual growth rate in Scopus database ranges from 23.91 to 14.51, in the last decade there is a decreasing trend of AGR value from 22.32 to 9.60. Compared to Web of Science database the university has published total of 1980 publications and the annual growth rate ranges from 14 to 35.2. In the recent years there are good numbers of publications traced in the Web of Science database.

3.2 Document Wise Distribution

Fig. 1 shows the document wise distribution of research output of Tamil Nadu Agricultural University as reflected in both Scopus and Web of Science database for the period of 2001-2020. It is clear that Articles are the predominant publications by the faculty members of Tamil Nadu Agricultural University, Coimbatore 3928 in Scopus and 1822 in Web of Science respectively.

Table 2 depicts that there are various type of publications are contributed by the faculty members of Tamil Nadu Agricultural University such as Article, Conference paper, Book Chapter, Reviews, Notes, Letter, Book, Editorial, erratum, short survey and data paper in which Articles are the predominant source of publications in both Scopus and web of Science by the faculties of the University 89.84 and 92% respectively.

Table 3 shows the Top 25 predominant subject categories focussed by the faculty members of Tamil Nadu Agricultural University, Coimbatore in Scopus Database. Since It is an Agricultural University their focus is more on Agricultural and Biological Sciences subject category in Scopus 3317 publications followed by Biochemistry, Genetics and Molecular Biology, 769 and Environmental Science 528 publications.

Table 1. Year wise research output and annual growth rate of Tamil Nadu Agricultural University in scopus and web of science databases

| SI. No | Publication Year | Scopus Publications | Annual Growth rate | Web of Science Publications | Annual Growth rate |
|--------------|------------------|---------------------|--------------------|-----------------------------|--------------------|
| 1 | 2001 | 122 | - | 50 | - |
| 2 | 2002 | 92 | -24.59 | 57 | 14.00 |
| 3 | 2003 | 114 | 23.91 | 59 | 3.51 |
| 4 | 2004 | 118 | 3.51 | 71 | 20.34 |
| 5 | 2005 | 107 | -9.32 | 45 | 36.62 |
| 6 | 2006 | 134 | 25.23 | 57 | 26.67 |
| 7 | 2007 | 172 | 28.36 | 99 | 73.68 |
| 8 | 2008 | 164 | -4.65 | 112 | 13.13 |
| 9 | 2009 | 193 | 17.68 | 99 | 11.61 |
| 10 | 2010 | 221 | 14.51 | 91 | 8.08 |
| 11 | 2011 | 180 | -18.55 | 100 | 9.89 |
| 12 | 2012 | 195 | 8.33 | 81 | 19.00 |
| 13 | 2013 | 233 | 19.49 | 94 | 16.05 |
| 14 | 2014 | 285 | 22.32 | 119 | 26.60 |
| 15 | 2015 | 294 | 3.16 | 124 | 4.20 |
| 16 | 2016 | 304 | 3.40 | 140 | 12.90 |
| 17 | 2017 | 322 | 5.92 | 137 | 2.14 |
| 18 | 2018 | 292 | -9.32 | 125 | 8.76 |
| 19 | 2019 | 396 | 35.62 | 125 | 0.00 |
| 20 | 2020 | 434 | 9.60 | 169 | 35.20 |
| Total | | 4372 | | 1980 | |

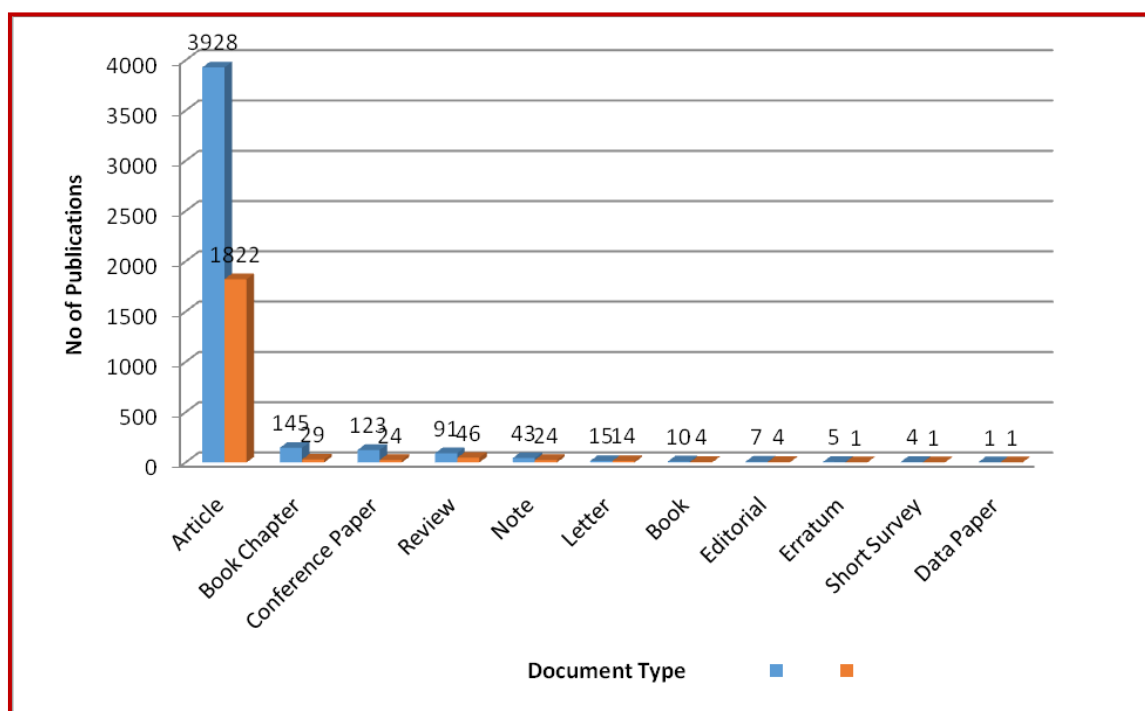


Fig. 1. Document type distribution of Tamil Nadu Agricultural University

Table 2. Document wise output of Tamil Nadu Agricultural University in scopus and web of science database

| SI. No | Document Type | Scopus | Percent (%) | WoS | Percent (%) |
|--------------|------------------|-------------|-------------|-------------|-------------|
| 1 | Article | 3928 | 89.84 | 1822 | 92.0 |
| 2 | Book Chapter | 145 | 3.32 | 29 | 2.3 |
| 3 | Conference Paper | 123 | 2.81 | 24 | 1.5 |
| 4 | Review | 91 | 2.08 | 46 | 1.5 |
| 5 | Note | 43 | 0.98 | 24 | 1.2 |
| 6 | Letter | 15 | 0.34 | 14 | 0.7 |
| 7 | Book | 10 | 0.23 | 4 | 0.3 |
| 8 | Editorial | 7 | 0.16 | 4 | 0.2 |
| 9 | Erratum | 5 | 0.11 | 1 | 0.2 |
| 10 | Short Survey | 4 | 0.09 | 1 | 0.1 |
| 11 | Data Paper | 1 | 0.02 | 1 | 0.1 |
| Total | | 4372 | 100 | 1980 | 100 |

Table 3. Subject wise research output of Tamil Nadu Agricultural University in scopus database

| SI. No | Subjects | Documents |
|--------|--|-----------|
| 1 | Agricultural and Biological Sciences | 3317 |
| 2 | Biochemistry, Genetics and Molecular Biology | 769 |
| 3 | Environmental Science | 528 |
| 4 | Immunology and Microbiology | 331 |
| 5 | Engineering | 297 |
| 6 | Medicine | 145 |
| 7 | Chemical Engineering | 140 |
| 8 | Multidisciplinary | 124 |
| 9 | Earth and Planetary Sciences | 118 |
| 10 | Chemistry | 117 |
| 11 | Pharmacology, Toxicology and Pharmaceutics | 106 |
| 12 | Social Sciences | 100 |
| 13 | Energy | 65 |
| 14 | Materials Science | 45 |
| 15 | Economics, Econometrics and Finance | 40 |
| 16 | Computer Science | 39 |
| 17 | Veterinary | 39 |
| 18 | Business, Management and Accounting | 31 |
| 19 | Physics and Astronomy | 29 |
| 20 | Mathematics | 25 |
| 21 | Health Professions | 14 |
| 22 | Nursing | 12 |
| 23 | Neuroscience | 8 |
| 24 | Decision Sciences | 7 |
| 25 | Arts and Humanities | 2 |

Table 4. Subject wise research output of Tamil Nadu Agricultural University in web of science database

| Sl. No | Subjects | Documents |
|--------|------------------------------------|-----------|
| 1. | Plant Sciences | 499 |
| 2. | Agronomy | 490 |
| 3. | Biotechnology Applied Microbiology | 190 |
| 4. | Horticulture | 159 |
| 5. | Environmental Sciences | 129 |
| 6. | Food Science Technology | 116 |
| 7. | Agriculture Multidisciplinary | 113 |
| 8. | Entomology | 110 |
| 9. | Microbiology | 104 |
| 10. | Agricultural Engineering | 103 |
| 11. | Multidisciplinary Sciences | 74 |
| 12. | Soil Science | 70 |
| 13. | Biochemistry Molecular Biology | 67 |
| 14. | Genetics Heredity | 63 |
| 15. | Meteorology Atmospheric Sciences | 36 |
| 16. | Engineering Chemical | 31 |
| 17. | Ecology | 29 |
| 18. | Water Resources | 28 |
| 19. | Chemistry Analytical | 27 |
| 20. | Chemistry Applied | 27 |
| 21. | Energy Fuels | 23 |
| 22. | Toxicology | 23 |
| 23. | Chemistry Medicinal | 21 |
| 24. | Engineering Environmental | 21 |
| 25. | Nutrition Dietetics | 21 |

Table 4 shows the Top 25 predominant subject categories focussed by the faculty members of Tamil Nadu Agricultural University, Coimbatore in Web of Science Database. Plant Sciences (499), Agronomy (490), Biotechnology Applied Microbiology (190), Horticulture (159) and Environmental Science (129) are the predominant subject areas focused by the faculty members.

Table 5 shows the Top 10 predominant collaborating institutions with the Tamil Nadu Agricultural University, Coimbatore as reflected in Scopus Database. Agricultural College and Research Institute, Madurai is the most collaborating institution with 538 publications followed by Indian Council of Agricultural Research (128) and ICAR - Sugarcane Breeding Institute, Coimbatore (84) publications. It is clear that most of the publications are collaborated with agricultural institutions in the Tamil Nadu region.

Table 6 shows the Top 10 predominant collaborating institutions with the Tamil Nadu Agricultural University, Coimbatore as reflected in Web of Science Database. It is clear that Kansas State University has more collaboration with 50 publications with 78 total local citations, 1335 total global citations followed by International Crops Research Institute with 49 publications and Indian Council of Agricultural research with 43 publications.

Table 7 shows the Top 10 predominant sponsors of Tamil Nadu Agricultural University, Coimbatore research publications as reflected in Scopus Database. Indian Council of Agricultural Research has supported for 104 research publications followed by Department of Biotechnology, Ministry of Science and Technology, India 89 publications and Department of Science and Technology, Ministry of Science and Technology, India 63 publications and so on.

Table 5. Collaboration of Institution wise in research output Tamil Nadu Agricultural University in Scopus database

| Sl. No | Institution Name | Documents |
|--------|--|-----------|
| 1. | Tamil Nadu Agricultural University | 4168 |
| 2. | Agricultural College and Research Institute, Madurai | 538 |
| 3. | Indian Council of Agricultural Research | 128 |
| 4. | ICAR - Sugarcane Breeding Institute, Coimbatore | 84 |
| 5. | ICAR - Indian Agricultural Research Institute, New Delhi | 80 |
| 6. | International Crops Research Institute for the Semi-Arid Tropics | 73 |
| 7. | Ministry of Environment & Forests, Government of India | 71 |
| 8. | Anbil Dharmalingam Agricultural College and Research Institute | 68 |
| 9. | Rajasthan Agricultural University, Agricultural Research Station | 65 |
| 10. | Kansas State University | 59 |

Table 6. Collaboration of Institution wise in research output Tamil Nadu Agricultural University in Web of Science Database

| S. No | Institution | Recs | Percent | TLCS | TGCS |
|-------|-----------------------------------|------|---------|------|-------|
| 1 | Tamil Nadu AgrUniv | 1776 | 89.7 | 1183 | 28113 |
| 2 | TNAU | 77 | 3.9 | 22 | 1041 |
| 3 | Kansas State Univ | 50 | 2.5 | 78 | 1335 |
| 4 | Int Crops Res Inst Semi Arid Trop | 49 | 2.5 | 32 | 943 |
| 5 | Indian Council Agr Res | 43 | 2.2 | 50 | 1203 |
| 6 | Int Rice Res Inst | 35 | 1.8 | 50 | 1525 |
| 7 | Chungbuk NatlUniv | 33 | 1.7 | 47 | 1283 |
| 8 | Indian Agr Res Inst | 33 | 1.7 | 22 | 409 |
| 9 | Agr Coll& Res Inst | 31 | 1.6 | 13 | 298 |
| 10 | Bot Survey India | 28 | 1.4 | 4 | 48 |

Table 7. Sponsorship wise in research output Tamil Nadu Agricultural University in Scopus database

| Sl. No | Name of the Sponsor | Documents |
|--------|---|-----------|
| 1. | Indian Council of Agricultural Research | 104 |
| 2. | Department of Biotechnology, Ministry of Science and Technology, India | 89 |
| 3. | Department of Science and Technology, Ministry of Science and Technology, India | 63 |
| 4. | Department of Biotechnology, Government of West Bengal | 58 |
| 5. | University Grants Commission | 55 |
| 6. | Department of Science and Technology, Government of Kerala | 29 |
| 7. | Science and Engineering Research Board | 26 |
| 8. | Rockefeller Foundation | 22 |
| 9. | Council of Scientific and Industrial Research, India | 18 |
| 10. | Ministry of Human Resource Development | 17 |

3.3 Country wise Collaboration

Fig. 2 shows the country wise collaboration of research activity by the Tamil Nadu Agricultural University, Coimbatore as reflected in Scopus

and Web of Science Database for the period of 2001-2020. It is clearly depicted that USA is the predominant country collaborated with 187 in Scopus and 137 in Web of Science followed by South Korea, Canada, Australia and Philippines.

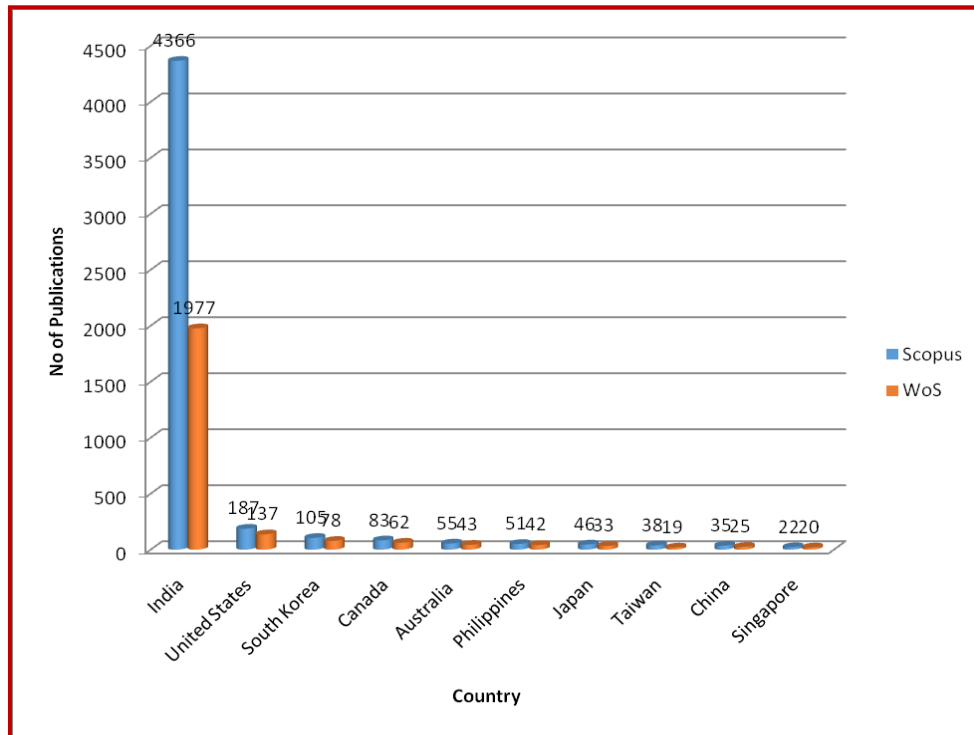


Fig. 2. Country wise Collaborative research output of Tamil Nadu Agricultural University in Scopus and Web of Science Database

3.4 Author wise Distribution of research output of Tamil Nadu Agricultural University

It is very Clear that Prof Samiyappan R has 141 publications in Scopus and 93 in Web of Science

followed by Raveendran M has 113 in Scopus and 41 in WoS, Raguchandar T has 112 in Scopus and 55 in WoS publication as reflected in the database. It shows predominant top 5 influencing authors of Tamil Nadu Agricultural University, Coimbatore.

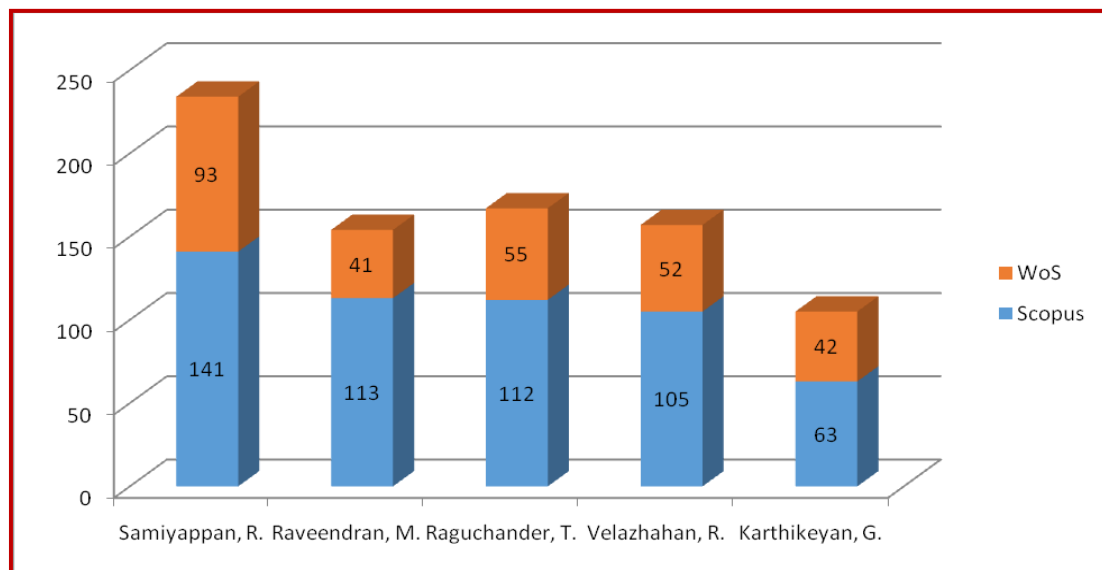


Fig. 3. Author wise in research output Tamil Nadu Agricultural University in Scopus and Web of Science database

Table 8. Source wise research output of Tamil Nadu Agricultural University in Scopus database

| Sl. No. | Name of the journal | Documents |
|---------|---|-----------|
| 1 | Electronic Journal of Plant Breeding | 448 |
| 2 | Pestology | 160 |
| 3 | Archives of Phytopathology and Plant Protection | 117 |
| 4 | Acta Horticulturae | 104 |
| 5 | AMA Agricultural Mechanization In Asia Africa And Latin America | 101 |
| 6 | Research on Crops | 81 |
| 7 | Legume Research | 72 |
| 8 | Indian Journal Of Agricultural Sciences | 60 |
| 9 | Journal Of Biopesticides | 60 |
| 10 | Indian Journal Of Agronomy | 58 |

3.5 Source Wise Distribution

Table 9. Source wise research output of Tamil Nadu Agricultural University in Web of Science database

| S. No | Journal | Recs | Percent | TLCS | TGCS |
|-------|---|------|---------|------|------|
| 1 | Legume Research | 69 | 3.5 | 4 | 116 |
| 2 | Ama-Agricultural Mechanization In Asia Africa And Latin America | 65 | 3.3 | 2 | 17 |
| 3 | Indian Journal of Agricultural Sciences | 54 | 2.7 | 5 | 80 |
| 4 | Research on Crops | 48 | 2.4 | 0 | 12 |
| 5 | Current Science | 39 | 2.0 | 17 | 368 |
| 6 | Journal of Food Science And Technology-Mysore | 37 | 1.9 | 6 | 247 |
| 7 | Indian Journal of Agronomy | 33 | 1.7 | 1 | 53 |
| 8 | Plant Archives | 30 | 1.5 | 1 | 24 |
| 9 | Crop Protection | 29 | 1.5 | 78 | 1119 |
| 10 | Indian Journal of Horticulture | 28 | 1.4 | 4 | 35 |

Table 8 shows the predominant source wise publications of Tamil Nadu Agricultural University, Coimbatore as reflected in Scopus Database. Electronic Journal of Plant Breeding has 448 publications, Pestology (160) and Archives of Phytopathology and Plant Protection (117) publications.

Table 9 shows the predominant source wise publications of Tamil Nadu Agricultural University, Coimbatore as reflected in Web of Science Database. Legume Research is the most predominant journal with 69 publications followed by AMA-Agricultural Mechanization in Asia Africa and Latin America 65 publications and Indian Journal of Agricultural Sciences 54 publications.

3.6 Findings of the Study

- Tamil Nadu Agricultural University faculty members published more publications in

Scopus 4372 compared to Web of Science 1980.

- Articles are the predominant publications by the faculty members of Tamil Nadu Agricultural University, Coimbatore 3928 in Scopus and 1822 in Web of Science
- Prof. Samiyappan R is the predominant and most impactful author of Tamil Nadu Agricultural University.
- USA is the most predominant country collaborated with Tamil Nadu Agricultural University publications about 187 in Scopus and 137 in Web of Science
- Legume Research is the most predominant journal with 69 publications in Web of Science and Electronic Journal of Plant Breeding 448 publications in Scopus.
- Agricultural College and Research Institute, Madurai is the most collaborating institution with 538 publications in Scopus and Kansas State University in Web of Science database.

- Plant Sciences (499), Agronomy (490), Biotechnology Applied Microbiology (190), Horticulture (159) and Environmental Science (129) are the predominant subject areas focused by the faculty members of Tamil Nadu Agricultural University in Web of Science and Agricultural and Biological Sciences subject category in Scopus 3317 publications.
- Indian Council of Agricultural Research is the predominant sponsor and supported for 104 research publications followed by Department of Biotechnology, Ministry of Science and Technology, India

4. CONCLUSION

Institutional quality is currently assessed using a variety of factors, including contributions to research and innovation in the academic setting. In the Agriculture area, this study highlights the intellectual output of one of the named institutions in the Coimbatore region. Academicians can use a scientometric study to better understand their current situation and the areas of research that need to be addressed. This report provides an overview of agricultural institution research calamities, which is critical in estimating and moving on with more research and innovation in the field of agriculture.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Sankar M, Prema C. Research productivity of Tamil Nadu Agricultural University as reflected in scopus database: A Scientometric dimension. Asian Journal of Agricultural Extension, Economics & Sociology. 2022;40(10):852-860.
2. Mathew S, Sheeja NK. Research Output of Universities in Tamil Nadu-An Analysis Based on Scopus Database. International Journal of Information Dissemination and Technology. 2018;8(1):1-7. Available: <https://www.scopus.com/>
3. Available: <https://www.scopus.com/>
4. Available: <https://www.webofknowledge.com/>
5. Hugar JG. Scientific publications of Goa University as reflected in web of science database during 2008–2017. Available at SSRN 3620143. Science Citation Index Expanded. Scientometrics. 2019;68:151–166.
6. Siwach AK, Parmar S. Research contributions of CCS Haryana agricultural university, Hisar: A bibliometric analysis. DESIDOC Journal of Library & Information Technology. 2018;38(5):334-341..
7. Sankar M, Prema C. Research Productivity of Tamil Nadu Agricultural University as Reflected in Scopus Database: A Scientometric Dimension. Asian Journal of Agricultural Extension, Economics & Sociology. 2022;40(10): 852-860.
8. Arumugam J, Balasubramani R. Scholarly research output of kumaraguru college of technology, Coimbatore: Scientometric Analysis. Library Philosophy and Practice (E-journal). 2020;4158. Available: <https://digitalcommons.unl.edu/libphilprac/4158>
9. Geetha N, Kothainayaki S. Research output of Anna University: A bibliometric study based on scopus database. Asian Journal of Information Science and Technology. 2019;9(S1):84–91.
10. Sheeja NK, Susan Mathew K, Surendran Cherukodan. Impact of scholarly output on university ranking. Global Knowledge, Memory and Communication. 2018;67(3): 154-165.
11. Sankar M. Research output of plant science in Tamil Nadu Agricultural University: A study. Journal of Advances in Library and Information Science. 2020;9 (1):17-21.

© 2023 Sankar and Prema; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/93470>