



Scientometric Analysis of Scholarly Publications of University of Agricultural Sciences, Dharwad from 1991 to 2020.

Dr. Chikkamanju¹ and Dr. G. Kiran Kumar²

¹Assistant Librarian, University Library, UAS, Dhrawad, Karnataka

Email: chikkamanjumys@gmail.com

²Assistant Librarian, College of Agriculture, Vijayapur, (UAS, Dhrawad), Karnataka

kirankumarmyslib@gmail.com

Abstract

This study attempts to identify the scientometric characteristics of the scholarly publications in the various journals from CeRA-Jgateplus database during the study period from 1991-2020 of the University of Agricultural Sciences, Dharwad. The University has published 362 articles, it shows that the University of Agricultural Sciences, Dharwad has published highest number of articles in Agricultural Biotechnology 232(64.09%). The highest number of articles are published from Journal of Farm Sciences amounting to 223(61.60%). In the year 2015 maximum number of articles are published amounting to 29(08.01%), about 226(62.43%) articles have been published from University of Agricultural Sciences and India takes first place with 348 (96.13%) articles. B. B. Channappagoudar 18(04.97%), and S. M. Hiremath 15 (04.14%). are the most productive authors with research articles. The study also evaluates and ranked by authors productivity, research and most relevant journals.

Keywords: Scientometrics, J-Gateplus database, University of Agricultural Sciences, Dharwad, CeRA, UAS-Dharwad.

1. Introduction

Scientometrics is a method of research used to map the scientific productivity of different natures. The study of the use of different types of information sources and patterns of publications. Scientometric studies provide various metrics to assess the scholarly literature. It helps in identifying publication patterns, research hotspots, the impact of publications, the increasing tendency of research production the leading research stakeholders, and many more things. Scientometric indicators are used for the quantitative and qualitative analysis evaluates the growth of literature in a particular subject. It helps to understand the strong and weak areas of research fields; accordingly, any institute can change its policies. These studies

are to identify and understand the growth pattern, progress and nature of spreading literature of any disciplines or area of research and helps to make necessary decisions and build up the nation's science policy different ranking of authors, institutions, universities and countries. The research activities are carried out by the University of Agricultural sciences, Dharwad in various disciplines. The study is about the publication pattern of faculty members of University of Agricultural Sciences, Dharwad. Hence an effort has been made in this article to identify the core area of scholarly publication, year wise distribution, publisher wise, geographical distribution wise, authorship pattern and other publishing trends.

2. Need and Important of the Study

Scientometric is a study concerned primarily with the analysis and describing of a literature. In the process of such a study it adopts the mathematical or statistical methods and forwards a theoretical proposition. When literature in a discipline is analyzed, varieties in the publication pattern are evident. Thus, it is observed from the papers published in a discipline that the number of authors or scientists. The article by analyzing all the above patterns in a logical manner, the technique of Scientometric helps to trace the trends in research in the discipline. With the increase in the number of scientific and technical journals and their raising cost, librarians are facing hindrance in the process of acquisition of current scientific publications, maintenance and procurement of back volumes of scientific publications. Hence this study is intended to help librarians in the judicious of selection of the periodicals.

The present study is focusing light on the publication pattern of faculty members of university of Agricultural Sciences, Dharwad in the CeRA-Jgateplus databases. It serves as a key to identify the research trends in the field. It helps the librarian recognizing the core journals in the field by depicting the journals prepared by the authors for publication of their research results immediately.

3. Objectives of the Study

The core objectives of the study are:

1. To identify the subject-wise publications output.
2. To examine the journal distribution of published resources.
3. To find out the year wise distribution of published resources.
4. To examine publisher wise distribution of published resources.
5. To study the geographical distribution of published resources.
6. To study the authorship pattern of the contributors.

4. Scope and Methodology of the Study

A Scientometric method is used for the present study. The study is limited to University of Agricultural Sciences, Dharwad the data has been collected from the CeRA- Jgateplus databases. The study period was restricted to 1991 to 2020. To search the information the keywords like 'University Agricultural Sciences, Dharwad' and 'UAS, Dharwad' terms are used. The study is based on the

bibliographic details for each record including subject, journal, year of publication, Publisher, geographical and authorship, input are collected. The search strategy yielded to 362 records, were found further all the bibliographic details have been collected and recorded on a spreadsheet. The data so collected were tabulated and analyzed in order to obtain results in respect of the stated objectives.

5. Data Analysis and Findings

In this article, an attempt has been made by the investigator to analyze the data collected for the study to get the desired objectives. Various statistical techniques are used for the analysis and tabular representations are used to make the analysis more meaningful.

Table-5.1: Subject Wise Distribution of Published Resources

Name of the Subject	Number of articles	Percentage	Name of the Subject	Number of articles	Percentage
Agricultural Biotechnology	232	64.09	Biotechnology(Engineering)	01	00.28
Horticulture & Plant Culture	20	05.52	Biotechnology(Life Sci & Bio medical Sci.)	01	00.28
Crop Production & Protection	19	05.25	Dry land Farming	01	00.28
Agrobusiness, Economics & Policies	11	03.04	General & Others Agricultural Sciences	01	00.28
Agronomy	09	02.49	Herbal Medicines	01	00.28
Agricultural Engineering	08	02.21	Information Sources & Services	01	00.28
Botany(Basic Sciences)	07	01.93	Library Automation	01	00.28
Botany(Life Sciences)Agrl.	05	01.38	Library Networks	01	00.28
Organic Farming, Rural Development, sustainable Agriculture	05	01.38	Micro & Molecular Biology	01	00.28
Pests, Pest Control & Integrated Pest Mgt	05	01.38	Pharmacy & Pharmacology	01	00.28
Plant Breeding	04	01.10	Political Sciences	01	00.28
Plant Pathology	04	01.10	Seed Technology & Propagation	01	00.28
Soil Chemistry, Microbiology, Fertility & Fertilizer	04	01.10	Sociology	01	00.28
Animal Husbandry, Live stock Mgt. & Poultry Sci.	03	00.83	Taxonomy & Systematics	01	00.28
Biotechnology(Life Sciences & Basic Sci.)	02	00.55	Toxicology	01	00.28
Education & Careers	02	00.55	Veterinary Sciences(Ag.Sci)	01	00.28
Agricultural Engineering	01	00.28	Virology(Life Sciences)Biomedical Sciences	01	00.28
Anthropology	01	00.28	Water & Water	01	00.28

			resources		
Biochemistry(Life Science & Basic Science)	01	00.28	Zoology(Life Sciences)	01	00.28

The Table-1 shows the subject distribution of published resources. Out of the total 362 published resources, 232(64.09%) articles have been published from Agricultural Biotechnology, followed by 20 (05.52%) Horticulture & Plant Culture, about 19 (05.25%) Crop Production & Protection, 11(03.04%) Agro business, Economics & Policies, 09 (02.49%) Agronomy, 08 (02.21%) Agricultural Engineering, 07 (01.93%) Botany (Basic Sciences), 05(01.38%) each articles were published from Botany (Life Sciences) Agrl., Organic Farming, Rural Development, Sustainable Agriculture, Pests, Pest Control & Integrated Pest Management, 04(01.10%) each articles were published from the Plant Breeding, Plant Pathology & Soil Chemistry, Microbiology, Fertility & Fertilizer. About 03(0.83%) are from Animal Husbandry, Live stock Management & Poultry Science, 02(0.55%) each articles were published in Biotechnology (Life Sciences & Basic Science) & Education & Careers and the table also shows in detail subject distribution of published resources.

Table-5.2: Journal Wise Distribution of Published Resources

Name of the Journals	Number of articles	Percentage	Name of the Journals	Number of articles	Percentage
Journal of Farm Sciences	223	61.60	Bioscan	01	00.28
Green Farming	18	04.97	Current Advances in Agricultural Sciences	01	00.28
Trends in Biosciences	16	04.42	Ecology, Environment and Conservation	01	00.28
Journal of Ornamental Horticulture	09	02.49	Indian Horticulture Journal	01	00.28
Acta Horticulture	07	01.93	Indian Journal of Agricultural Sciences	01	00.28
Asian Journal of Horticulture	06	01.66	Indian Journal of Animal Sciences	01	00.28
Legume Research	05	01.38	Indian Journal of Dryland Agricultural Research & development	01	00.28
Agricultural Science Digest	04	01.10	Indian Journal of Entomology	01	00.28
Electronic Journal of Plant Breeding	04	01.10	Indian Journal of Extension of Education	01	00.28

Biochemical And Cellular Archives	04	01.10	Indian Journal of Horticulture	01	00.28
Indian Journal of Agricultural Research	03	00.83	Indian Journal of Natural Products and Resources	01	00.28
International Journal of Agriculture	03	00.83	Indian Journal of Plant Genetics Resources	01	00.28
International Journal of Farm Sciences	03	00.83	Indian Journal of Social Research	01	0.28
Journal of Biological Control	03	00.83	Indian Phytopathology	01	00.28
Mysore Journal of Agriculture	03	00.83	Indian Research Journal of Extension Education	01	00.28
African Journal of Agricultural Research	02	00.55	International Journal of Agricultural Sciences	01	00.28
Crop Research	02	00.55	International Journal of Bio-Resource and Stress Management	01	00.28
Forage Research	02	00.55	International Journal of Forestry & Crop Improvement	01	00.28
Indian Journal of Agronomy	02	00.55	International Journal of Home Science & Extension & Communication Mgt	01	00.28
Indian Journal of Plant Protection	02	00.55	International Journal of Plant Sciences	01	00.28
International Journal of Agriculture Sciences	02	00.55	Journal of Biopesticides	01	00.28
Research on Crops	02	00.55	Journal of Indian Library Association	01	00.28
Advances in Crop Science and Technology	02	00.55	Library Progress	01	00.28
African Journal of Biotechnology	01	00.28	Madras Agricultural Journal	01	00.28
African Journal of Microbiology	01	00.28	PEARL - A Journal of Library and Information Science	01	00.28

Agricultural Economics Research Review	01	00.28	Pest Management in Horticulture	01	00.28
Agriculture Update	01	00.28	Progressive Horticulture	01	00.28
Asian Agri-history	01	00.28	Range Management and Agroforestry	01	00.28
Asian Journal of Agricultural Extension, Economic & Sociology	01	00.28	Soybean Research	01	00.28

The Table-2 shows the journal wise distribution of published resources. Out of the total 362 published resources, 223(61.60%) articles have been published from Journal of Farm Sciences, followed by 18(04.97%) articles published from Green Farming, about 16(4.42%) articles published from Trends in Biosciences, 09(02.49%) articles were published from Journal of Ornamental Horticulture, 07(01.93%) articles were published from Acta Horticulture, 06(01.66%) articles were published from Asian Journal of Horticulture, 05(01.38%) articles were published from Legume Research, 04(01.10%) articles were published from Agricultural Science Digest & Electronic Journal of Plant Breeding & Biochemical And Cellular Archives each. About 03(0.83%) articles were published each from Indian Journal of Agricultural Research, International Journal of Agriculture, International Journal of Farm Sciences, Journal of Biological Control & Mysore Journal of Agriculture and the table also shows in detail number of articles published in various journals.

Table-5.3: Year Wise Distribution of Published Resources

Year of Publications	Number of articles	Percentage	Year of Publications	Number of articles	Percentage
2020	22	06.08	2004	11	03.04
2019	14	03.87	2003	3	00.83
2018	26	07.18	2002	6	01.66
2017	25	06.91	2001	6	01.66
2016	17	04.7	2000	3	00.83
2015	29	08.01	1999	1	00.28
2014	26	07.18	1998	7	01.93
2013	14	03.87	1997	5	01.38
2012	20	05.52	1996	1	00.28
2011	21	05.8	1995	3	00.83
2010	16	04.42	1994	1	00.28
2009	16	04.42	1993	1	00.28
2008	20	05.52	1992	0	00.00
2007	25	06.91	1991	1	00.28
2006	10	02.76			
2005	12	03.31			

The Table-3 shows the year distribution of published resources, Out of the total 362 published resources published till the year 2020, about 22 (06.08%) articles have been published during the year 2020, followed by during the year 2019 amount to 14(03.87%), during the year 2018 amounts to 26(07.18%), during the year 2017 amount to 25(06.91%), during the year 2016 amount to 17(4.17%), during the year 2015 amount to 29(08.01%), during the year 2014 were 26(7.18%), during the year 2013 were 14(3.87%), during the year 2012 amount to 20(5.52%), during the year 2011 amount to 21(5.8%), during the year 2010 & 2009 there were 16(4.42%) each. During the year 2008 amount to 20(5.52%), during the year 2007 amount to 25(06.91%), during the year 2005 amount to 12(03.31%), during the year 2004 amount to 11(03.04%), during the year 2001& 2002 there amount to 06(1.66%) each, during the year 1995, 2000 and 2003 amount to 03(00.83%) each, during the year 1998 amount to 07(01.93%), during the year 1997 amount to 05(01.38%), during the year 1996, 1994, 1993 and 1991 amount to 01 (00.28%) each.

Table-5.4: Publisher Wise Distribution of Published Resources

Name of the Publisher	Number of articles	Percentage	Name of the Publisher	Number of articles	Percentage
University of Agricultural Sciences	226	62.43	Crop Protection Research Centre	01	00.28
Dr. A. Hussain	18	04.97	Diva Enterprises Pvt. Ltd	01	00.28
Society for Advancement of Sciences and Rural Development	16	04.42	Dr. Anil M. Mungikar	01	00.28
Agricultural Research Communication Centre	12	03.31	Em International	01	00.28
Hind Agri-horticultural Society	10	02.76	Entomological Society of India	01	00.28
Indian Society of Ornamental Horticulture	09	02.49	Horticultural Society of India	01	00.28
International Society for Horticultural Science	07	01.93	Indian Library Association	01	00.28
Academic Journals	04	01.10	Indian Society of Advanced Horticulture	01	00.28
Indian Society of Plant Breeders	04	01.10	Indian Society of Dryland Agriculture	01	00.28
Dr. P.r Yadav	03	00.83	Indian Society of Extension Education	01	00.28
Society for Biocontrol Advancement	03	00.83	Indian Society of Horticultural Research and Development	01	00.28
Society for the Advancement of Human and Nature	03	00.83	Indian Society of Plant Genetics	01	00.28
Transstellar Journal Publications and Research Consultancy Private Limited	03	00.83	Informatics Publishing Limited	01	00.28

Bioinfo Publications	02	00.55	International Journal of Agricultural Statistical Sciences	01	00.28
Gaurav Publications	02	00.55	International Scholars Journal	01	00.28
Gaurav Society of Agricultural Research Information Centre	02	00.55	Madras Agricultural Students Union	01	00.28
Indian Council of Agricultural Research	02	00.55	National Environmentalists Association	01	00.28
Indian Society of Agronomy	02	00.55	National Institute of Sciences	01	00.28
Indian Society of Forage Research	02	00.55	Range Management Society		00.28
Plant Protection Association	02	00.55	Science domain International	01	00.28
Academic and Law Serials	02	00.55	Society for Soybean Research and Development	01	00.28
Agricultural Economics Research Association	01	00.28	Society of Agricultural Professionals	01	00.28
Asian Agri-history Foundation	01	00.28	Society of Extension Education	01	00.28
Association for Advancement	01	00.28	Springer Nature	01	00.28
Bpas Publications	01	00.28	University Library Teacher's Association of Andhra Pradesh	01	00.28

The Table-4 shows the publisher wise distribution of published resources. Out of the total 362 published resources, 226(62.43%) articles have been published from University of Agricultural Sciences, followed by 18(04.97%) articles from Dr. A. Hussain, 16(4.42%) articles Society for Advancement of Sciences and Rural Development, 12(3.31%) Agricultural Research Communication Centre, 10(02.76%) Hind Agri-Horticultural Society, 09 (2.49%) Indian Society of Ornamental Horticulture, 07(1.93%) International Society for Horticultural Science, 04(01.10%) Academic Journals and Indian Society of Plant Breeders have published articles each and the table also shows in detail publisher wise distribution of published resources.

Table-5.5: Geographical wise Distribution of Published Resources

Name of the Country	Number of Articles	Percentage
India	348	96.13
Belgium	07	01.93
Nigeria	04	01.10
United States of America	02	00.55
Germany	01	00.28

The Table-5 shows the geographical wise distribution of published resources in the field of Agricultural Sciences. Out of the total 362 published resources, 348(96.13%) of articles have been published from India, followed by 07 (01.93%) of articles from Belgium, 04 (01.10%) of articles from Nigeria, 02 (00.55%) of articles from United States of America and 01 (00.28%) of articles have been published from Germany in the CeRA-Jagateplus databases.

Table-5.6: Authorship Pattern of the Contributions

Name of the Authors	Number of articles	Percentage	Name of the Authors	Number of articles	Percentage
B B Channappagoudar	18	04.97	H Venkatesh	03	00.83
S M Hiremath	15	04.14	H Y Patil	03	00.83
N R Biradar	14	03.87	J B Patil	03	00.83
B N Patil	13	03.59	J C Mathad	03	00.83
Ravi Hunje	11	03.04	Kasturiba B	03	00.83
V P Chimmad	11	03.04	L Manjunath	03	00.83
R V Koti	10	02.76	M Jayanna	03	00.83
D P Biradar	08	02.21	M R Ansari	03	00.83
V S Patil	08	02.21	M S Biradar	03	00.83
S Lingappa	07	01.93	Mohan Chavan	03	00.83
T D Bharamagoudar	07	01.93	N K Biradar Patil	03	00.83
S C Alagundagi	06	01.66	P R Dharmatti	03	00.83
B S Vyakaranahal	05	01.38	Pandit S Rathod	03	00.83
B S Vyakarnahal	05	01.38	R Basavarajappa	03	00.83
H L Nadaf	05	01.38	R H Patil	03	00.83
R K Patil	05	01.38	R M Hosamani	03	00.83
Y B Palled	05	01.38	Ramesh Babu	03	00.83
G S Dasog	04	01.10	S G Angadi	03	00.83
J S Awaknavar	04	01.10	S I Halikatti	03	00.83
K A Kulkarni	04	01.10	S M Mutanal	03	00.83
M B Chetti	04	01.10	S Mohankumar	03	00.83
N Basavaraj	04	01.10	S S Meli	03	00.83
N S Hebsur	04	01.10	S V Hosamani	03	00.83
P L Patil	04	01.10	Shobha Nagnur	03	00.83

Pavan Shinde	04	01.10	T B Allolli	03	00.83
R L Ravikumar	04	01.10	T C Patil	03	00.83
R S Giraddi	04	01.10	T D Bharmagoudar	03	00.83
S I Harlapur	04	01.10	Utpal Dey	03	00.83
S J Patil	04	01.10	V P Savalgi	03	00.83
S S Angadi	04	01.10	A D Janawade	02	00.55
U V Mummigatti	04	01.10	A P Suryawanshi	02	00.55
V C Patil	04	01.10	A S Kamble	02	00.55
V K Deshpande	04	01.10	A S Vastrad	02	00.55
A A Patil	03	00.83	A Y Hugar	02	00.55
A N Mokashi	03	00.83	Ahire L M	02	00.55
A R Alagawadi	03	00.83	Ashok Sajjan S	02	00.55
A S Prabhakar	03	00.83	Ashok Surwenshi	02	00.55
Angadi S S	03	00.83	B B Madalageri	02	00.55
Arjun Sharma	03	00.83	B Kasturiba	02	00.55
B M Chittapur	03	00.83	B L Harikrishna	02	00.55
D N Dhutraj	03	00.83	B S Janagoudar	02	00.55
D S Uppar	03	00.83	B S Yenagi	02	00.55
H B Babalad	03	00.83	B T Ningalur	02	00.55

The Table-6 shows the authorship pattern of the contributions to resources, out of the total 362 articles published in the different journals available in the CeRA-Jgateplus databases, B B Channappagoudar with 18(4.97%) published articles, followed by S M Hiremath with 15 (04.14%) published articles, N R Biradar with 14 (03.87%) published articles, B N Patil with 13(03.59%) articles, Ravi Hunje & V P Chimmad 11(03.04%) published articles, R V Koti 10(2.76%) articles, D P Biradar & V S Patil 08(02.21%) published articles, S Lingappa & T D Bharamagoudar 07(01.93%) published articles, S C Alagundagi 06(01.66%), B S Vyakaranahal, H L Nadaf, R K Patil & Y B Palled 05(01.38%) published articles and the also shows in detail authorship pattern of the contributions to resources.

6. Findings of the Study

- The total numbers of articles published, which are available in CeRA-Jgateplus databases are 362.
- The maximum number of articles were published from Agricultural Biotechnology 232(64.09%) and 20(05.52%) Horticulture & Plant Culture.
- The highest number of articles are published from Journal of Farm Sciences amounting to 223(61.60%) and Horticulture & Plant Culture amounting 20(5.52%).
- The maximum number of articles were published in the year 2015 that is 29(08.01%) and in 2014 amounts to 26(7.18%).

- In publisher wise distribution of articles, about 226(62.43%) articles have been published from University of Agricultural Sciences, followed by 18(04.97%) articles from Dr. A. Hussain publishers.
- In the country wise distribution of articles, India takes first place with 348 (96.13%) articles, followed by Belgium is takes second place with 07 (1.93%) articles.
- Authorship pattern of contributions shows that maximum number articles are contributed by B B Channappagoudar amounting to 18(04.97%), followed by S M Hiremath with 15 (04.14%).

7. Conclusion

The article examines the authorship pattern, publication productivity of faculty members of universities, quantity and quality of the publications are major factors considered for ranking of universities and the publication output of the faculty members has a major role in this especially in science. Its growth and advancement is equally important as of other disciplines in the universe of knowledge for better use by the scholars in the agriculture sector. The process of procuring journals for libraries can be made on co-operative basis among the research and university libraries situated within a convenient distance. The study reflects the light on strengths and weaknesses in the primary discipline of the University of Agricultural Sciences, Dharwad. It helps the university to give priority to research accordingly. It is essential to emphasize that the above conclusions are based on the findings of the present study.

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