Soil Science Society of America Journal: A Citation Analysis Using Google Scholar H5 Index

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Abstract

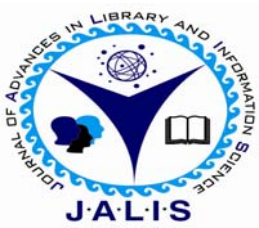
This paper aimed to find out the top most journals in the field of Soil Science . The Google Scholar Metrics was used to identify the top 20 Journal publications using a search string " Soil Science " .The journal "Soil Science Society of America Journal "get the first place with the h5-index number 37, during the period of 2009-2013.Based on the various objectives the study was carried out . The out of 1227 articles 21.93%(269) of the articles published in the year 2009. Followed by 20.29%(249) articles published in 2011. 22 no.of highly cited articles published in 2009.The author wise distribution of the cited articles three authored articles were 12 published, followed by five authored articles 7.The highest no.of 1150 citation distributed in the year 2009.

Keywords

Google scholar, Soil science society, Journal ranking, Citation

Electronic access

The journal is available at www.jalis.in



Journal of Advances in Library and Information Science
ISSN: 2277-2219 Vol. 4. No.2. 2015. pp. 120-123

INTRODUCTION

Google Scholar provides a simple way to broadly search for scholarly literature. From one place, you can search across many disciplines and sources: articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites. Google Scholar helps one to find relevant work across the world of scholarly research. Google Scholar Metrics provide an easy way for authors to quickly gauge the visibility and influence of recent articles in scholarly publications. Scholar Metrics summarize recent citations to many publications, to help authors as they consider where to publish their new research.[1]

SOURCE JOURNAL: SOIL SCIENCE SOCIETY OF AMERICA JOURNAL

The Soil Science Society of America (SSSA), is a scientific and professional society of soil scientists,principally in the U.S. but with a large number of non-U.S. members as well. It was formed in 1936 from the merger of the Soils Section of the American Society of Agronomy and the American Soil Survey Association. Soil Science Society of America Journal (previously Soil Science Society of America Proceedings),(SSSAJ) is published bimonthly, is the official publication of the Soil Science Society of America. The SSSA Journal publishes papers on original research, issue papers, reviews, comments and letters to the editor, and book reviews. Topics include and extend beyond basic and applied soil research in agricultural, forest, wetlands, and urban settings.[2]

OBJECTIVES

- To know the top most rank of the Journals in the field of Soil Science
- To study the year wise distribution of publications
- To find out highly cited articles in the publications
- To study authorship pattern of highly cited publications
- To study the year wise distribution of the citations
- To identify highest number of citations received a paper.

REVIEW OF LITERATURE

Salim Moussa and Mourad Touzani (2010)[4] have examined the ranking of 69 marketing journals using a new Hirsch-type index, the *hg*-index which was the geometric mean of *hg*. The applicability of this index was tested on data retrieved from Google Scholar on marketing journal articles published between 2003 and 2007. Chih-Fong Tsai (2014)[5] described citation based approaches, such as the impact factor and *h*-index, have been used to measure the influence or impact of journals for journal rankings. A survey of the related literature for different disciplines shows that the level of correlation between these citation based approaches was domain dependent. They analysed the correlation between the impact factors and *h*-indices of the top ranked computer science journals for five different subjects. Vanclay,Jerome K(2008)[6] has investigated ranking of forestry journals was compared with journal impact factors and h-indices computed from the ISI Web of Science and internet-based data. Citations reported by Google Scholar offer an efficient way to rank all journals objectively, in a manner consistent with other indicators. A ranking of 180 forestry journals was presented, on the basis of h- index.

METHODOLOGY:

In this study Scientometric method is used to analyse bibliographic data, Retrieved from Google Scholar Metric h5-index.It is the h-index for articles published in the last 5 complete years. It is the largest number h such that h articles published in 2009-2013. The Google Scholar Metrics was used to identify the top 20 Journal publications using a search string " Soil Science " .The journal Soil Science Society of America Journal is the first place with the H5-index number 37. Scholar Metrics are currently based on h5-index as it was in June 2014.

ANALYSIS

Top 20 publications Retrieved from Google scholar h5-index using a search string "Soil Science ". From the table 1. Soil Science Society of America Journal with 37 h5-Index of the total contribution is the top most source journal. This is followed by European Journal of Soil Science with 32 h5-index is the second ranked journal. Journal of Plant Nutrition and Soil Science with a contribution of 24 h5-index is the third ranked journal. The lowest rank of the journal is Soil Science Agrochemistry and Ecology with 1 h5-index.So that over all the 20 journal Soil Science Society of America Journal is the First ranked journal in the list taken to the study.

Table 1: Ranked List of Journals

S.No	Publication	h5-index
1.	Soil Science Society of America Journal	37
2.	European Journal of Soil Science	32
3.	Journal of Plant Nutrition and Soil Science	24
4.	Soil Science and Plant Nutrition	16
5.	Communications in Soil Science and Plant Analysis	15
6.	Soil Science	15
7.	Acta Agriculturae Scandinavica, Section B-Soil & PlantScience	14
8.	Canadian Journal of Soil Science	13
9.	Journal of Soil Science and Plant Nutrition	13
10.	Archives of Agronomy and Soil Science	10
11.	Applied and Environmental Soil Science	10
12.	Eurasian Soil Science	9
13.	Journal of Soil Science and Environmental Management	7
14.	Journal of the Indian Society of Soil Science	6
15.	International Research Journal of Agricultural Science and Soil Science	6
16.	Japanese Journal of Soil Science and Plant Nutrition (Japan)	4
17.	Moscow University Soil Science Bulletin	3
18.	Asian Journal of Soil Science	2
19.	Pochvoznanie, Agrokhimiya i Ekologiya (Soil Science Agrochemistry and Ecology)	1
20.	Sains Tanah-Journal of Soil Science and Agroclimatology	1

Table 2: Year wise publications of Soil Science Society of America Journal

Year of publication	No. of Articles	Percent
2009	269	21.93
2010	247	20.13
2011	249	20.29
2012	237	19.32
2013	225	18.33
Total	**1227**	**100**

Table 2. gives the year wise distribution of articles in Soil Science Society of America Journal. Out of 1227 articles, maximum number of articles found in the year 2009 contributing 269, which is 21.93 % to the total publications. In 2011, 249articles were contributed. Minimum number of articles 225 found in the year of 2013.[3]

Table 3: Highly cited articles in the Soil Science Society of America Journal

Year of publication	No.of highly cited articles	Percent
2009	22	59.45
2010	10	27.03
2011	5	13.52
2012	0	0
2013	0	0
Total	**37**	**100**

Table 3 shows that total of 37 articles mostly cited during the period of 2009-2013. In the year 2009 published articles 22 were cited, which is 59.45% to the total cited articles, followed by 10 articles were cited in 2010. Only 5 article was cited in the year 2011. No one article cited in the year 2012 and 2013 publication during the study period.

Table 4: Distribution of cited authors

Year	Single author	Two authors	Three authors	Four authors	Five authors	Six authors	More than six authors	Total
2009	-	3	8	2	2	5	2	**22**
2010	1	2	3	1	3	-	-	**10**
2011	-	1	1	-	2	1	-	**5**
2012	-	-	-	-	-	-	-	**-**
2013	-	-	-	-	-	-	-	**-**
Total	**1**	**6**	**12**	**3**	**7**	**6**	**2**	**37**

The table 4 reveals that three authors articles were cited 12, followed by five authors cited articles were 7. Six and two authored articles were each 6. The single authored cited articles was1 only.

Table 5: Distribution of Total Citations

Year	Cited Articles	Total Citations	Percent
2009	22	1150	59.09
2010	10	551	28.32
2011	5	245	12.59
2012	0	0	0
2013	0	0	0
Total	**37**	**1946**	**100**

The table 5 represents that in the year 2009, published 22 articles which has 1150 citations which is 59.09 % of the total citation. Followed by 10 articles published in 2010 has 551 citations which is 28.32%. In 2011, 5 article were cited by 245. In the year 2012 and 2013 publication no one articles cited.

Table 6: Most cited papers

Title/Author	Cited by	Year
Effect of Charcoal Quantity on Microbial Biomass and Activity in Temperate Soils SE Kolb et al. Soil Science Society of America Journal 73 (4), 1173-1181	107	2009
Unweathered Wood Biochar Impact on Nitrous Oxide Emissions from a Bovine-Urine-Amended Pasture Soil .TJ Clough et al.	85	2010

Soil Science Society of America Journal 74 (3), 852-860		
Role of Particle Size and Soil Type in Toxicity of Silver Nanoparticles to Earthworms WA Shoults-Wilson et al. Soil Science Society of America Journal 75 (2), 365-377	72	2011
--	0	2012
--	0	2013

The top most cited papers obtained from Google scholar h5-index is listed in table 6. A paper entitled " *Effect of Charcoal Quantity on Microbial Biomass and Activity in Temperate Soils*" by SE Kolb, KJ Fermanich, ME Dornbush published in the journal Soil Science Society of America Journal 73 (4), 1173-1181 in 2009 has received the highest citation count 107. Followed by the paper entitled **"***Unweathered Wood Biochar Impact on Nitrous Oxide Emissions from a Bovine-Urin"* TJ Clough et.al in the journal Soil Science Society of America Journal 74 (3), 852-860 in the year 2010 has received 85 citation is the second most cited paper in the journal.

Table 7: Articles Citing *Effect of Charcoal Quantity on Microbial Biomass and Activity in Temperate Soils*

Year	No.of citation	Percent
2010	7	6.55
2011	14	13.08
2012	29	27.10
2013	34	31.78
2014	23	21.49
Total	**107**	**100**

Table 6.7 shows Article citing *Effect of Charcoal Quantity on Microbial Biomass and Activity in Temperate Soils* has 107 citations. In the year 2013, highest number of 34 citations has received which is 31.78 % of the total citations. The lowest number of 7 citations received in the year 2010 which is 6.55 of the total citations.

CONCLUSION

The study concludes that Soil Science Society of America Journal was the top ranked journal in the subject Soil Science for the consecutive years 2009-2013.The total number of publication of articles are 1227. Out of this 22 articles cited highly with the total of 1150 citations in this study period. Among the cited articles *Effect of Charcoal Quantity on Microbial Biomass and Activity in Temperate Soils* published in 2009 has got highest citation count of 107. This is the top most cited article in the journal publication of the study period.

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