Research Output of Plant Science in Tamil Nadu Agricultural University: A Study

M. Sankar
Assistant Librarian
Tamil Nadu Agricultural University
Agricultural College & Research Institute
Vazhavachanur,Thiruvannamali-606753
E.Mail:sankarmlib@tnau.ac.in

Abstract

Recently metric studies are very important role play in the higher educational Institutions. The accreditation agency also measure the institutional research output like documents and database covered and H index etc. In this context to upgrade the institutional ranking scientists were involved and also much importance given to the researches. The research output covered in various databases like Google Scholar, Scopus and Web of Sciences etc. In this study deals to the research output of Tamil Nadu Agricultural University in the plant science subject covered under web of Science database. There are totally 1865 articles covered all years but this data taken period from 2001 to 2020 .The 471 records traced for Tamil Nadu Agricultural University Scientists and Researchers. This study analysis to find out the year wise output, Source wise ,topmost journals, top most author wise, Institution wise and Keyword most occurrence in the research . The study analyses interpret the Citation various citation scores in the Local and Global level of Scientometric aspects.

Keywords

Web of Science , Plant Science; Tamil Nadu Agricultural University

Electronic access

The journal is available at www.jalis.in

Journal of Advances in Library and Information Science
ISSN: 2277-2219 Vol. 9. No.1. 2020. pp.17-21

Introduction

Recently metric studies are very important role play in the higher educational Institutions. The accreditations agency also measure the institutional research output like articles, Review documents, Proceedings etc and database covered and H index etc. In this context to upgrade the institutional ranking scientists were involved and also much importance given to the researches. The National International agencies also encouraged to support research for funding to most prolific ranked institutions. Now a days all the Educational and Research oriented institutions were engaged to the research powerfully. The Web of Science database only covers to the citation scores in locally and Globally and also represents with analysis with diagrammatically

Review of Related Literature

Kian Savanur and konnur (2012) attempted the reasech of Growth and impact of research output of Bangalore university,1971-2010: A scientometric study and it highlighted quantitative growth analysis of Banglaore university in Science and Technology research output as per Science Citation Index for the period 1970-2010.the results found that average number of publications per year 54.7 year wise and authorship and also most preferred journals in Current Science publications. Raghuraman,Chandler and Madras (2010) describes the study of research has comparison of research performance in the institutions in Indian with other international institutions. The results found that high impact of other countries and also the Asian countries. More number of research papers published in India was minisccule compared to United state universities. Institutions do not compare favorably with top US or Asian universities.

Objectives of the Study

- To identify the year wise distribution of research output of Plant Science.
- To identify the frequency of source wise distribution in Plant Science of Tamil Nadu Agricultural University research output.
- To identify the frequency of top most journals distribution in Plant Science of

Tamil Nadu Agricultural University research output**.**

- To identify the frequency top most author wise distribution in Plant Science of Tamil Nadu Agricultural University research output**.**

- To identify the frequency of Institutional collaboration in Plant Science of Tamil Nadu Agricultural University research output

- To identify the Keyword mostly occurred in Plant Science of Tamil Nadu Agricultural University research output**.**

METHODOLOGY

In this study the secondary sources are taken for analysis from the Web of Science on line data base. The Web of knowledge is the search platform provided by Thomson Reuters (the former Thomson Scientific emerged from the Institute for Scientific Information (ISI) in Philadelphia). The period of study 2001 to 2020 is selected as the database is available. The search string is "Plant Science" field web of science was used for the year's from 2001 to 2020 upto march month download and the limit to Tamil Nadu Agricultural University records based the string and all the downloaded data were analyzed through histcite Software as per the objectives of the study.

Table. 1: Year wise in TNAU Plant Science research output

Sl.No	Publication Year	Recs	Percent	TLCS	TGCS
1	2000	11	2.34	30	178
2	2001	12	2.55	27	306
3	2002	11	2.34	13	144
4	2003	20	4.25	17	573
5	2004	25	5.31	14	727
6	2005	14	2.97	4	388
7	2006	13	2.76	12	226
8	2007	32	6.79	8	263
9	2008	36	7.64	8	287
10	2009	20	4.25	0	194
11	2010	18	3.82	4	226
12	2011	18	3.82	2	97
13	2012	11	2.34	4	135
14	2013	21	4.46	2	227
15	2014	24	5.10	9	201
16	2015	49	10.40	7	168
17	2016	38	8.07	7	131
18	2017	28	5.94	1	107
19	2018	37	7.86	3	84
20	2019	23	4.88	1	6
21	2020	10	2.12	0	0
Total	**471**	**100**			

The 200 to 2020 a total of 471 Publications were published in Plant Science by Tamil Nadu Agricultural University. In the year wise average number of publications produced per year was 4.46%.The highest number of publication output 49 was 2015. Table 1 was detailed given in the year wise research output and their percentage and also citation scores in Local and Global level in the field of Plant Science. It is clearly shows that 2015,2016,2018,2008,2007,2004,2014,2019,2003,2009 and other remaining year was below twenty numbers of research output

Table. 2: Frequency of Document type wise in TNAU Plant Science research output

Sl.No	Document Type	Recs	Percent
1	Article	391	83.01
2	Proceedings Paper	30	6.37
3	Editorial Material	17	3.61
4	Meeting Abstract	14	2.97
5	News item	14	2.97
6	Review	4	0.85
7	Letter	1	0.21
	Total	**471**	**100**

Tamil Nadu Agricultural University scientists are communicated in their research output through various forms of communication. It proved that above table interprets the distribution of following frequency of documents. It was observed that 391 (83.01%) of the Article was published followed Proceedings paper 30(6.37%), Editorial Materials,17(3.61%) Meeting Abstract , News item each 14(2.97%) in Review 4(0.85%) and letter is 1(0.21%).

Table. 3: Frequency of Journal Publication wise in TNAU Plant Science research output(Top 30)

Sl.No	Journal	Recs	TLCS	TGCS
1	PLANT ARCHIVES	30	0	21
2	ZEITSCHRIFT FUR PFLANZENKRANKHEITEN UND PFLANZENSCHUTZ-JOURNAL OF PLANT DISEASES AND PROTECTION	23	32	204
3	PHYTOPARASITICA	21	20	211
4	I INTERNATIONAL SYMPOSIUM ON CASHEW NUT	19	0	2
5	EUPHYTICA	16	4	296
6	INDIAN JOURNAL OF GENETICS AND PLANT BREEDING	16	0	12
7	PHYTOPATHOLOGY	15	0	7
8	PLANT BREEDING	15	10	235
9	COMMUNICATIONS IN SOIL SCIENCE AND PLANT ANALYSIS	14	1	71
10	PHYTOTAXA	14	7	11
11	JOURNAL OF PLANT NUTRITION	13	0	45
12	BIOLOGIA PLANTARUM	12	13	231
13	PLANT DISEASE	12	4	26
14	FRONTIERS IN PLANT SCIENCE	11	0	47
15	EUROPEAN JOURNAL OF PLANT PATHOLOGY	10	10	136
16	JOURNAL OF PLANT INTERACTIONS	10	3	72
17	PLANT AND SOIL	10	4	617
18	ACTA PHYSIOLOGIAE PLANTARUM	9	3	107
19	SEED SCIENCE AND TECHNOLOGY	9	2	19
20	PHYSIOLOGICAL AND MOLECULAR PLANT PATHOLOGY	8	2	119
21	PHYTOPATHOLOGIA MEDITERRANEA	8	4	81
22	JOURNAL OF PLANT BIOCHEMISTRY AND BIOTECHNOLOGY	7	1	49
23	PLANT SCIENCE	7	21	603
24	BANGLADESH JOURNAL OF BOTANY	6	0	15
25	GENETIC RESOURCES AND CROP EVOLUTION	5	1	136
26	INDIAN JOURNAL OF TRADITIONAL KNOWLEDGE	5	0	21
27	JOURNAL OF PLANT PATHOLOGY	5	0	2
28	KEW BULLETIN	5	0	3
29	MOLECULAR BREEDING	5	0	42
30	NORDIC JOURNAL OF BOTANY	5	1	2

The most productive journal is Plant archives 30 papers ,Second rank Zeitschrift……Plant Protection dealing with Plant Science and 23 papers ,third rank is Phytoparasitica 21 and all other journals are below twenty numbers of documents.

Table. 4: Frequency of Author wise in TNAU Plant Science research output(Top 30)

Sl.No.,	Author	Recs	TLCS	TGCS
1.	Samiyappan R	45	46	788
2.	Velazhahan R	38	72	588
3.	Karthikeyan G	24	4	53
4.	Raguchander T	18	11	265
5.	Singh RK	18	4	11
6.	Vidhyasekaran P	17	36	205
7.	Senthil N	15	4	158
8.	Rabindran R	14	6	77
9.	Raveendran M	14	1	95
10.	Djanaguiraman M	13	10	522
11.	Balasubramanian P	12	14	281
12.	Nakkeeran S	12	1	16
13.	Muthukrishnan S	11	29	315
14.	Robin S	11	1	120
15.	Sudhakar D	11	10	248
16.	Babu RC	10	5	353
17.	Mohankumar S	10	3	21
18.	Nagendran K	10	4	22

19.	Renukadevi P	10	1	17
20.	Gnanasekaran G	9	4	6
21.	Malathi VG	9	1	17
22.	Murthy GVS	9	4	4
23.	Nagarajan P	9	6	95
24.	Prasad PVV	9	8	98
25.	Rajendran L	9	3	47
26.	Kavino M	8	3	82
27.	Kokiladevi E	8	9	145
28.	Maheswaran M	8	2	176
29.	Pandiyan M	8	1	16
30.	Ram SG	8	1	164
31.	Rajendran L	9	3	47

Table 4 Shows that author wise frequency of Plant Science research and also Total local citation scores and Total Global citation scores. Samiyappan R,45 articles, Velazhahan R has 38 articles and Karthikeyan G has 24 articles. Raguchander T has 18 articles, Vidhyasekaran P has 17 articles,and Senthil N has 15 articles and all other authors were published in below fifteen numbers of documents.

Table. 5: Institutional Collaboration wise TNAU Plant Science research output (Top 25)

S.No	Institution	Recs	TLCS	TGCS
1	Kansas State Univ	28	38	498
2	Bot Survey India	19	3	16
3	Int Crops Res Inst Semi Arid Trop	16	10	240
4	Indian Agr Res Inst	12	0	75
5	Washington State Univ	11	4	16
6	Indian Council Agr Res	10	3	85
7	Int Rice Res Inst	9	12	216
8	Univ Agr Sci	8	2	79
9	ICAR Indian Inst Vegetable Res	7	0	9
10	Natl Chung Hsing Univ	5	3	43
11	Annamalai Univ	4	0	9
12	Bharathiar Univ	4	1	38
13	Chungbuk Natl Univ	4	2	107
14	ICAR Res Complex	4	6	16
15	Punjab Agr Univ	4	0	39
16	Southern Reg Ctr	4	0	1
17	Sugarcane Breeding Inst	4	0	27
18	Texas Tech Univ	4	4	246
19	USDA ARS	4	2	70
20	Auburn Univ	3	1	14
21	Bogor Agr Univ	3	0	1
22	Cent Plantat Crops Res Inst	3	1	16
23	Cornell Univ	3	1	212
24	Directorate Rice Res	3	1	46
25	Madurai kamraj University	3	0	0

Table 5 shows that Institutional collaboration wise distribution of articles in TNAU Plant Science research .It is clearly shows that Kansas State Univ 28 articles ,Second rank has Bot Survey India produced 19 articles , third rank has Int Crops Res Inst Semi Arid Trop has 16 and Indian Agricultural Research Institute has 12 articles collaboration with Tamil Nadu Agricultural university.

Table. 6: Mostly occurred Keyword in Plant Science TNAU research output (Top 30)

Sl.No	Keyword	Recs	TLCS	TGCS
1	RICE	97	65	1830
2	RESISTANCE	69	58	1117
3	INDIA	58	9	102
4	VIRUS	34	17	122
5	ANALYSIS	31	5	350
6	ORYZA	29	8	564
7	YIELD	29	5	174
8	GENETIC	28	6	374
9	SATIVA	28	8	560
10	NEW	26	3	47
11	USING	26	10	269
12	PLANT	25	3	245
13	SPECIES	23	6	172
14	BLIGHT	22	32	407
15	GROWTH	22	4	281
16	DROUGHT	21	3	268
17	INDUCTION	21	36	435
18	LEAF	21	5	234
19	CASHEW	20	1	4
20	EFFECT	20	5	395
21	GENOTYPES	20	5	181
22	MILLET	20	8	226
23	VIGNA	20	7	252
24	COTTON	19	4	123
25	LINES	19	3	85
26	MANAGEMENT	19	1	83
27	TOLERANCE	19	5	407

28	BANANA	18	4	100
29	FIRST	18	6	51
30	MOSAIC	18	7	63

Keywords are one of the important components in metric studies. It is east to trace the research papers and find to out the occurrence of frequency. The keyword is available in the abstract of document and also available in the content of papers. The high frequency keyword occured in Rice 97 times, Resistance 69 times and India has 58 times occurred in the research output.

Conclusion

Tamil Nadu Agricultural University is Plant Science Research is remarkable in the world renowned international database results. The following findings has found in the Tamil Nadu Agricultural University plant science research output in the web of Science database results. It shows the highest number of publication output 49 was in the year 2015.TNAU scientists are communicated in their research output mostly in article. papers in (83.01%). The most productive journal is Plant archives in 30 papers. Most prolific author is Samiyappan R,45 articles. An Institutional collaboration with Kansas State University for 28 articles in first rank. The high frequency keyword maximum occured in Rice 97 times.

References

[1]. http://apps.webofknowledge.com.elibrarytnau.remotexs.in/Search.do?product=WOS&SID=F67GEWXu8vMw6hRnKWY&search_mode=GeneralSearch&prID=79884c30-a1f1-4709-b0b1-9714ebfe44ac

[2]. Kian Savanur and konnur (2012) Growth and impact of research output of Bangalore university,1971-2010: A scientometric study, *International Journal of Library and Information Science*,.3(5),71-80,Available online.http://www.academicjournals.org/Ijlis

[3]. Raghuraman,Chandler and Madras (2010) Scientometric analysis of some Disciplines: Comparison of Indian Institutions with other international institutions, *Current Science*,99(5),309-329.