"An analysis of Doctoral thesis of phytopathology and titles word linkage : A Scientometric Study"

Dr. Amaravathi V* and Madhu N G**

*Department of Library and Information Science, Bangalore North University, mangasandhra, kolar

** Department of Library and Information Science, Bangalore North University, mangasandhra, kolar

Abstract

The present research study focused on field of phytopathology subject. The data has been downloaded from krishikosha website. This paper contains purpose of the study is To know the Average number of Citations in each Doctoral thesis of phytopathology, To find out Types of documents cited by researchers, To verify Authorship pattern of references, To find out Ranking of Periodicals, To know Age wise distribution of journal citations. The major findings of the present study is, A total of 2,211 references there are 1,240(56.08%) references from "Journal Articles", Followed by 439(19.86%) are from "Conference proceedings",123(5.57%) are from "Thesis and Dissertations", 390(17.64%) are from "Secondary Sources", 6(0.27%) are from "Electronic Sources" and 13(0.58%) are from "Incomplete references". 240(19.35%) references are from "Single Author" and 1,000(80.65%) are from "Multi Authors" 168(13.54%) are published from "Phytopatholohy" followed by 60(4.83%) are from "Indian phytopathology", 46(3.70%) are from "Plant Disease" and so on. Finally this research paper concluded that the scholars were citing more documents, and journals in their field and also majority of the researchers were citing in the field of phytopathology by using of databases and so on.

Key words : Scientometrics, phytopathology, Documents, purpose, journal articles, conference proceedings, dissertations, electronic sources, incomplete references, Doctoral thesis.

1. Introduction

Plant pathology or phytopathology is the scientific study of diseases of plants caused by infectious organisms and environmental conditions[1] Plant pathology involves the study of pathogen identification, disease cycles, economic impact, epidemiology of plant disease, how plant diseases affect humans and animals, management of plant diseases. Plant pathogens,

[1] Oliver, Richard, ed. (2024). *Agrios' plant pathology* (Sixth ed.). Amsterdam: Academic Press. ISBN 9780128224298. OCLC 1382797185.

organisms that cause infectious plant diseases, include fungi, bacteria, viruses, virus-like organisms, protozoa, nematodes and parasitic plants.[2] scientometrics is a subfield of informatics that studies quantitative aspects of scientific literature. Major research issues include the measurement of the impact of research papers and academic journals, the understanding of scientific citations, and the use of such measurements in policy and management contexts.[3]

Modern scientometrics is mostly based on the work of Derek J. de Solla Price and Eugene Garfield.[4] The latter created the Science Citation Index[5] and founded the Institute for Scientific Information which is heavily used for scientometric analysis. A dedicated academic journal, *Scientometrics*, was established in 1978. The industrialization of science increased the number of publications and research outcomes and the rise of the computers allowed effective analysis of this data.[6] Methods of research include qualitative, quantitative and computational approaches. The main focus of studies have been on institutional productivity comparisons, institutional research rankings, journal rankings[7] establishing faculty productivity and tenure standards[8] assessing the influence of top scholarly articles[9] and

[2] Nazarov, Pavel A.; Baleev, Dmitry N.; Ivanova, Maria I.; Sokolova, Luybov M.; Karakozova, Marina V. (27 October 2020). "Infectious plant diseases: etiology, current status, problems and prospects in plant protection". *ActaNaturae*. 12 (3):46–59.

[3] Leydesdorff, L. and Milojevic, S., "Scientometrics" arXiv:1208.4566 (2013), forthcoming in: Lynch, M. (editor), *International Encyclopedia of Social and Behavioral Sciences* subsection 85030. (2015)

[4] Garfield, Eugene (2009). "From the science of science to Scientometrics visualizing the history of science with HistCite software" (PDF). *Journal of Informetrics*. 3 (3): 173–179. doi:10.1016/j.joi.2009.03.009. ISSN 1751-1577. Retrieved 15 May 2021.

[5] Leydesdorff, L. and Milojevic, S., "Scientometrics" arXiv:1208.4566 (2013), forthcoming in: Lynch, M. (editor), *International Encyclopedia of Social and Behavioral Sciences* subsection 85030. (2015)

[6] De Solla Price, D., *editorial statement*. Scientometrics Volume 1, Issue 1 (1978)

[7] Lowry, Paul Benjamin; Moody, Gregory D.; Gaskin, James; Galletta, Dennis F.; Humpherys, Sean; Barlow, Jordan B.; and Wilson, David W. (2013). "Evaluating journal quality and the Association for Information Systems (AIS) Senior Scholars' journal basket via bibliometric measures: Do expert journal assessments add value?," MIS Quarterly (MISQ), 37(4), 993–1012. Also, see a YouTube video narrative of this paper at: https://www.youtube.com/watch?v=LZQIDkA-ke0.

[8] Dean, Douglas L; Lowry, Paul Benjamin; Humpherys, Sean (2011). "Profiling the research productivity of tenured information systems faculty at U.S. institutions". *MIS Quarterly*. 35 (1): 1–15. doi:10.2307/23043486. JSTOR 23043486. SSRN 1562263.

developing profiles of top authors and institutions in terms of research performance.[10] Krishikosh is repository of knowledge in agriculture and allied sciences, having collection, institutional publications, technical bulletins, project reports, thesis, and various documents spread all over the country in different libraries of Research Institutions and State Agricultural Universities (SAUs). Every effort is made to keep this repository up and access smoothly to the end users.[11]

2. Reviews of related literature

Gayan & Sanjay (2021) It is found in their research paper that 73.16 average documents are cited per thesis. a total of 1508 citations in 25 theses having the share of 82.07%. Books are the second highest cited documents having received a total of 153 citations in 25 theses with the share of 8.64% followed by 1501 citations come from 358 journals. The top ranked journal consists of 254 citations the second journal having received 96 citations and the third ranked journal received 60 citations. there are 5 journals with 507 citations; in the second zone there are 50 journals with 501 citations and in the third zone there are 303 journals with 493 citations.[12] **Mithu** (2018)Examine in their research paper that The study considered only those theses which were submitted to Shodhganga. Hence data were collected from 6 theses constituting 377 citations. All the 6 theses are from the area of Fuzzy Mathematics and completed in the year 2012. Data were collected in December, 2017 and analysed in January to February 2018. total number of 377 citations are two authored 166 (44.03 %) followed by 156(41.38%) are by one author , 46(12.2 %) have 3 authors, 8(2.12%) have 4 authors and the least citation are by More than four authors i.e. 1(0.27). This indicates that double authored papers are predominant in the field of Mathematics 311 (82.49 %) of total literature used,

---

[9] Karuga, Gilbert G.; Lowry, Paul Benjamin; Richardson, Vernon J. (2007). "Assessing the impact of premier information systems research over time". *Communications of the Association for Information Systems*. 19 (7): 115–131. doi:10.17705/1CAIS.01907. SSRN 976891.

[10] Lowry, Paul Benjamin; Karuga, Gilbert G.; Richardson, Vernon J. (2007). "Assessing leading institutions, faculty, and articles in premier information systems research journals". *Communications of the Association for Information Systems*. 20 (16): 142–203. doi:10.17705/1CAIS.02016. SSRN 1021603.

[11] https://krishikosh.egranth.ac.in/disclaimer

[12] Gayan, Mithu Anjali And Sanjay Kumar, Singh (2021) "Citation analysis of Mathematics: a scientometric study based on PhD theses, Tripura University". Library Philosophy and Practice (e-journal). 5

where as the proceedings used in 22(5.84%) followed by Books is used in 21 (5.57%). 96 (30.87%) followed by Journal of Mathematical Analysis and Applications 40 (12.86%); Journal of Tripura Mathematical Society 24 (7.72%); The Journal of Fuzzy Mathematics 19 (6.11%) and Acta Ciencia Indica and Bull. Calcutta. Math. Soc both having 8 (2.57%) each. It also found that 61(19.61%) journals are cited only once.[13] **Sudhier, K.G. et.,al.** (2010) Examine In their research paper there are 16 theses were identifies out of 300 publications, 165 (55%) were produced by male scholars and 135 (45%) by female scholars. Followed by Out of 168 theses, 21 were selected for citation analysis. The citation behaviour of researchers and the factors influencing the use of pattern of literature were identified. Citations like books, journals, and other forms of documents given in theses were examined. Statistical Analysis in Chemistry and Chemical Industry is the most cited book with 34 (6.45%) citations, followed by Organic Peroxides with 31 (5.88%).[14] **Nishtha Anilkumar** (2010) In their research paper 33 theses contained a total of 5,726 citations. Thus, on average each bibliography had 174 references followed by in the years 2001, 2002, 2004 and 2005. In 2001, ten theses were submitted, in 2002 five theses were submitted, in 2004 twelve theses were submitted and in 2005 six theses were submitted. In 2002, 2004 and 2005 the use of electronic resources by the students increased considerably as compared to 2001. shows the types of resources used by the students. Journal articles are the preferred resource and comprise 84.56% (4,842 references) of the total resources (5,726) used, 10.35% for books (593) and 5.08% for other documents (291).[15]

3. Back ground of the study

This present study is focused on the field of phytopathology. The data has been collected from krishikosha website. This study has been covered 11 doctoral theses of phytopathology and their 2,211 citations. The collected data has been tabulated and presented,in the form

[13] Mithu Anjali Gayan(2018) Citation Analysis of Doctoral theses of Mathematics, Tripura University: a Scientometric study. International Journal of Library Information Network and Knowledge. 3 (2).

[14] Sudhier, K.G. Pillai and Kumar, V. Dileep, (2010) "Scientometric Study of Doctoral Dissertations in Biochemistry in the University of Kerala, India". Library Philosophy and Practice (e-journal). 398.

[15] Nishtha Anilkumar (2010) Scientometric Study of Doctoral Theses of the Physical Research Laboratory. Library And Information Services In Astronomy VI ASP Conference Series, (433).

tables and graphs. and there were 06 thesis titles selected for linking of words in universe of knowledge.

4. Scope Methodology

The present study is limited to "*An analysis of Doctoral thesis, of phytopathology and titles word linkage : A Scientometric Study"*. The present Data has been collected from Krishikosh Website. The technique of citation is adopted for the study there are 11 doctoral thesis and their 2,211 citations are analyzed according to citation method. The collected data are tabulated presented, analysis and interpreted with the help of tables and graphs. The present data is entered in MS Excel sheet According to AACR2 cataloguing code. and there were 06 thesis titles selected for linking of words in universe of knowledge.

4. Objectives of the study

- To know the Average number of Citations in each Doctoral thesis
- To find out Types of documents cited by researchers
- To verify Authorship pattern of references
- To find out Ranking of Periodicals
- To know Age wise distribution of journal citations.

Table 1 Using Phytopathology thesis titles For Subject relation

Sl. No	Type of Crop		Name of Diseases	Organism Attacked
1	**Forage plants**			
	a.	Pigeon pea	Wilt	Bacteria
2	**Cereals**			
	a.	Sorghums	Root	Virus
	b.	Maize	Stalk Rot	Virus
3	**Flowers and ornamental plants**			
	a.	Sunflower	Leaf blight	Virus
4	**Industrial crops**			
	a.	Black pepper	Foot Rot	Virus
5	**Edible fruits and seed plants**			
	a.	Tomato	Leaf curl	Virus

Table . 1

Fig.1 one example of single disease Wilt Causing one Crops like Pigeonpea.

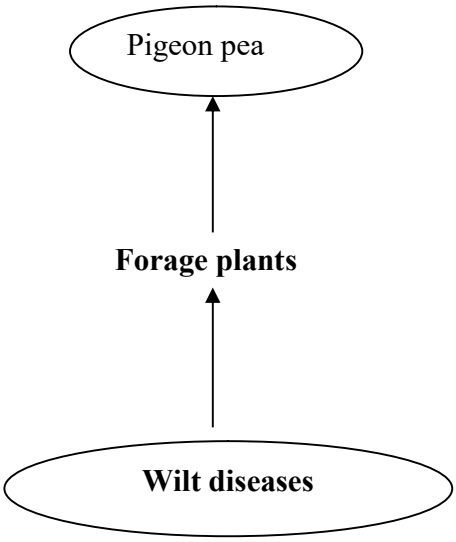

Fig.1

Thesis titles Referred

1. Studies on variation and Management of Fusarium Wilt of PIGEON PEA (Cajanus cajan(L.) Miliop.)

Fig.2 another example of Single disease Root rot causing Three different Crops like Sorghum Maize and Black pepper.

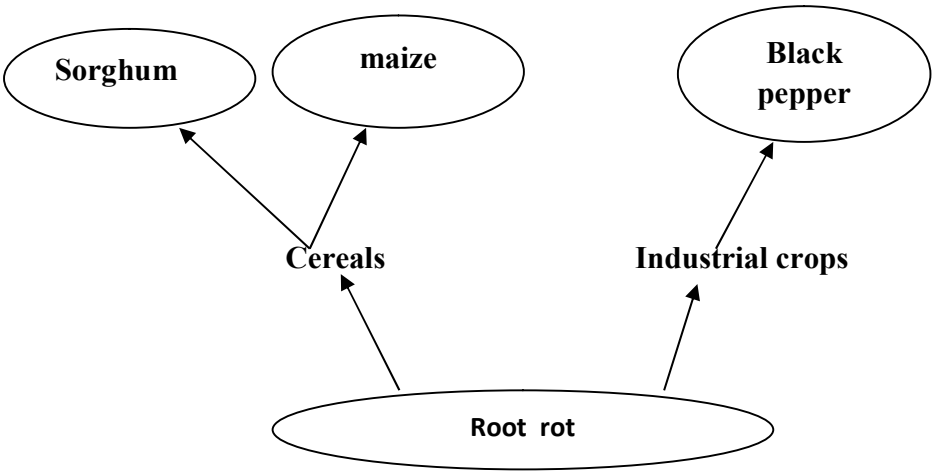

Fig.2

Referred thesis titles

1. Biological Control of Charcoal Rot of Sorghum (Sorghum blcolor(L.)Moeach) Caused By Macrophomina phaseolna(Tassl)Glod
2. Biology and management of Dry Stalk Rots of Maize (Zea Mays L.)Caused by Fuserium Monuiforme Shelld and Macrophomina phascolina(Tassi)goid.
3. Integrated management of phytophtors Foot Rot of Blackpepper through vA Mycorrhiza and host plant Resistance.

Fig .3 another example of Single disease **Leaf Blight** causing one crop **Sunflower.**

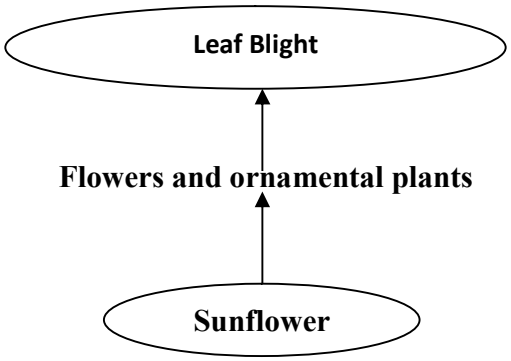

Fig.3

Referred thesis titles

1. Epidemiology and management of Alternaria Leaf Blight And Rust of Sunflower (Hellanthus annuus L.)

Fig.4 another example of Single disease Leaf curl causing one crop Tomato.

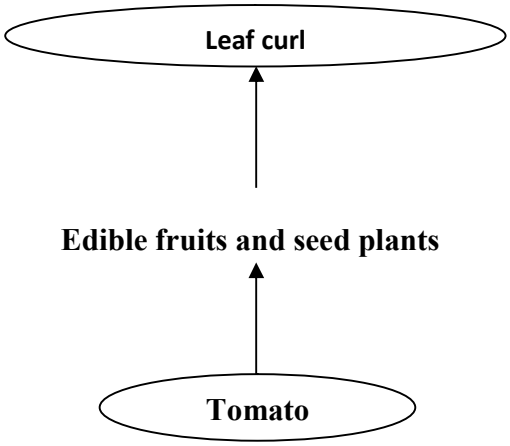

Fig.4

Referred thesis titles

Molecular probes for the detection of Tomato Leaf curl Gemini virus.

5. Data Analysis

Table : 2 Average number of Citations in each Doctoral thesis

Sl. No	No. of Thesis	Average Citations per volume	%
1	11	**2,211**	**201**

It is observed in T2 that Average number of Citations in each doctoral thesis the total of 11 doctoral thesis there were called 2,211 References. Their average references in each thesis is 201% .

Table : 3 Types of documents cited by researchers

Sl. No	Type of documents	Citations	%	Cumulative of citations	%
1	Journal Articles	1,240	56.08	1,240	56.08
3	Conference proceedings	439	19.86	1,679	75.93
4	Thesis and Dissertations	123	5.57	1,802	81.50
5	Secondary sources	390	17.64	2,192	99.14
6	Electronic Sources	06	0.27	2,198	99.41
7	Incomplete References	13	0.58	2,211	100
Total		2,211	100		

It is observed in T3 that Types of documents cited by researchers. A total of 2,211 references there are 1,240(56.08%) references from “Journal Articles”, Followed by 439(19.86%) are from “Conference proceedings”,123(5.57%) are from “Thesis and Dissertations”, 390(17.64%) are from “Secondary Sources”, 6(0.27%) are from “Electronic Sources” and 13(0.58%) are from “Incomplete references”

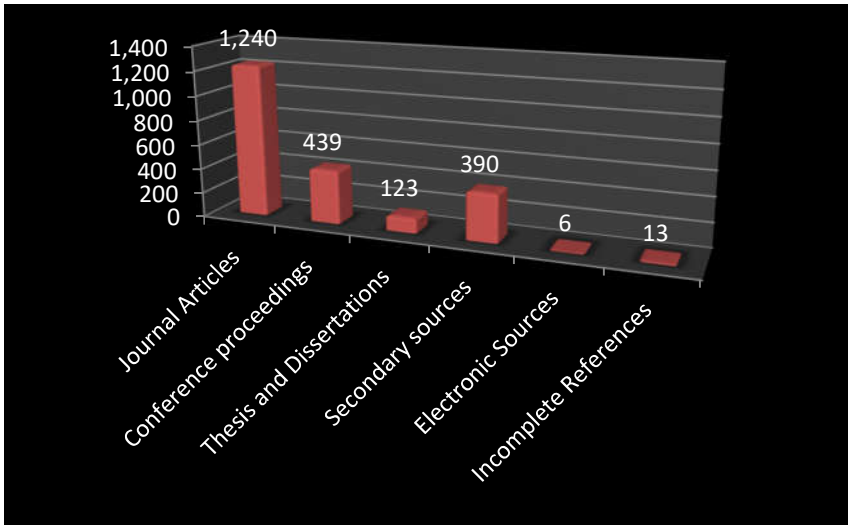

Fig.5 Types of documents cited by researchers.

Table : 4 Authorship pattern of references

Sl. No	No. of Authors	No. of References	%
1	Single Author	240	19.35
2	Multi Authors	1,000	80.65
Total		1,240	100

It is observed in T4 that Authorship pattern of references. A total of 1,240 references there are 240(19.35%) references are from "Single Author" and 1,000(80.65%) are from "Multi Authors".

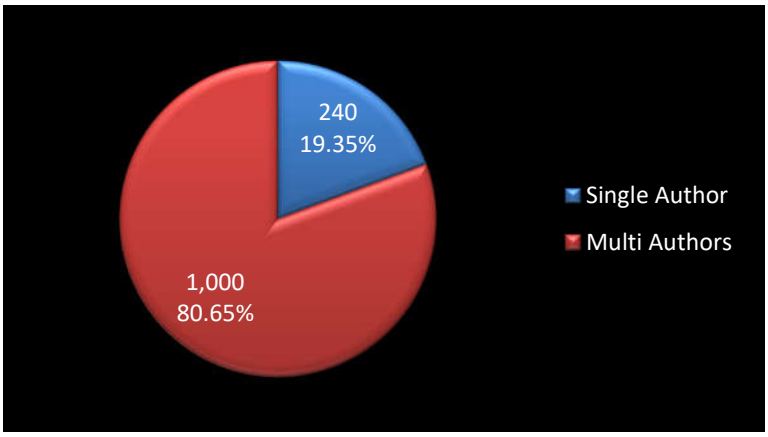

Fig.6 Authorship pattern of citations.

Table : 5 Ranking of Periodicals

Sl. No	Ranking . No	Journal Name	No. of Citations	%	Cumulative of Citations	%
1	1	Phytopathology	168	13.54	168	13.54
2	2	Indian phytopathology	60	4.83	228	18.38
3	3	Plant disease	46	3.70	274	22.09
4	4	Indian.j.mycol and pl.pathol	33	2.66	307	24.75
5	5	Pl.Dis.reptr	26	2.09	333	26.85
6	6	Phytoparasitica	24	1.93	357	28.79
7	7	Indian j.Agric.Sci	18	1.45	375	30.24

8	7	j.gen.viology	18	1.45	393	31.69
9	8	Curr.sci	17	1.37	410	33.06
10	9	Indian journal of Agricultural science	12	0.96	422	34.03
11	10	Indian j. Exp.biol	10	0.80	432	34.83
12	11	Ann.Appl.biol	09	0.73	441	35.56
13	11	Nature	09	0.73	450	36.29
14	12	Plant and soil	08	0.64	458	36.93
15	12	Phytopathologia mediterranean	08	0.64	466	37.58
16	12	Can.j.bot	08	0.64	474	38.22
17	12	Fitopatologia Brasileria	08	0.64	482	38.87
18	12	j.immunol methods	08	0.64	490	39.51
19	12	Madras Agric.j	08	0.64	498	40.16
20	12	Transactions of british mycological society	08	0.64	506	40.80
21	12	Sci.cul	08	0.64	514	41.45
22	12	Weed science	08	0.64	522	42.09
23	13	Trop.Agric	07	0.57	529	42.66
24	13	j.maharashtra Agric.univ	07	0.57	536	43.22
25	13	Acta Horticultural	07	0.57	543	43.79
26	13	j.American soc.horti.sci	07	0.57	550	44.35
27	13	j.Economic Entomology	07	0.57	557	44.91
28	14	Ann.phytopath.soc.japan	06	0.49	563	45.40
29	14	Australian journal of biological sciences	06	0.49	569	45.88
30	14	Environ.Entomol	06	0.49	575	46.37
31	14	Mycologia	06	0.49	581	46.85
32	15	Euphytica	05	0.40	586	47.25
33	15	Ann.Rev.phytopathol	05	0.40	591	47.66
34	15	Bulletin.indian	05	0.40	596	48.06

		phytopathological society				
35	15	Canadian.j.microbiol	05	0.40	601	48.46
36	15	Canadian journal of botany	05	0.40	606	48.87
37	15	j.res.punjab Agric.university	05	0.40	611	49.27
38	15	Microbiol.sci	05	0.40	616	49.67
39	15	Mysore j.Agric.sci	05	0.40	621	50.08
40	15	New phytologist	05	0.40	626	50.48
41	15	Pakistan journal of Agriculture research	05	0.40	631	50.88
42	16	Mycological research	04	0.33	635	51.20
43	16	j.invertebr.pathol	04	0.33	639	51.53
44	16	Egypt.j. Horti	04	0.33	643	51.85
45	16	Annual Reviewof phytopathology	04	0.33	647	52.17
46	16	Applied microbiology	04	0.33	651	52.5
47	16	Arab j.pl.prot	04	0.33	655	52.82
48	16	Archives of virology	04	0.33	659	53.14
49	16	Arecanut and spices journal	04	0.33	663	53.46
50	16	Biological con	04	0.33	667	53.79
51	16	Brit.mycol.soc	04	0.33	671	54.11
52	16	Canada plant disease	04	0.33	675	54.43
53	16	Crop. Prot	04	0.33	679	54.75
54	16	Indian.j.pulses.Res	04	0.33	683	55.08
55	16	Indian manual of Agricultural Science	04	0.33	687	55.40
56	16	International journal of pest management	04	0.33	691	55.72
57	16	j.Natural History	04	0.33	695	56.04
58	16	Jawaharlal Nehru krishi vishwavidyalaya Research	04	0.33	699	56.37

		journal				
59	16	Journal of Agricultural research	04	0.33	703	56.69
60	16	Journal of Indian botanical society	04	0.33	707	57.01
61	16	Journal of plantation crops	04	0.33	711	57.33
62	16	Journal of turkey phytopathology	04	0.33	715	57.66
63	16	Malaysian Agricultural journal	04	0.33	719	57.98
64	16	New Agriculturist	04	0.33	723	58.30
65	16	Soil and biochem	04	0.33	727	58.62
66	17	World journal of microbiology and biotechnology	03	0.24	730	58.87
67	17	Tropical pest management	03	0.24	733	59.11
68	17	Rajesthan j.of phytopathology	03	0.24	736	59.35
69	17	Netherland j.plant path	03	0.24	739	59.59
70	17	Legume Research	03	0.24	742	59.83
71	17	Journal of ultra structural research	03	0.24	745	60.08
72	17	Journal of tropical agriculture	03	0.24	748	60.32
73	17	Journal of spices and Aromatic crops	03	0.24	751	60.56
74	17	Journal of Experimental agricultural	03	0.24	754	60.80
75	17	Journal of biological control	03	0.24	757	61.04
76	17	Journal of Annamalai university	03	0.24	760	61.29
77	17	Journal of biological chemistry	03	0.24	763	61.53
78	17	Journal of chemical society of japan	03	0.24	766	61.77
79	17	Genetics and plant breeding	03	0.24	769	62.01
80	17	j.virological methods	03	0.24	772	62.25

81	17	j.Turkis phytopathol	03	0.24	775	62.5
82	17	j.soil.crops	03	0.24	778	62.74
83	17	j.seed.sci.technol	03	0.24	781	62.98
84	17	j.soc.expt.Agric	03	0.24	784	63.22
85	17	j.methods.cell and mol boil	03	0.24	787	63.46
86	17	j.botanical society	03	0.24	790	63.70
87	17	j.Agric.univ.p.Rica	03	0.24	793	63.95
88	17	j.indian.botanical.science	03	0.24	796	64.19
89	17	Indian.j.Ranchi University	03	0.24	799	64.43
90	17	Indian j.microbiol	03	0.24	802	64.67
91	17	Indian.j.horti	03	0.24	805	64.91
92	17	Indian.j.genetics	03	0.24	808	65.16
93	17	Horticultrra braslletur	03	0.24	811	65.40
94	17	German journal of botany	03	0.24	814	65.64
95	17	Indian journal of plant protection	03	0.24	817	65.88
96	17	Forage research	03	0.24	820	66.12
97	17	Chineses journal of biological control	03	0.24	823	66.37
98	17	Canadian journal of plant phytopathology	03	0.24	826	66.61
99	17	Canadian journal of microbiology	03	0.24	829	66.85
100	17	Canadian.j.pl.sci	03	0.24	832	67.09
101	17	Acta mycologia	03	0.24	835	67.33
102	17	African plant protection	03	0.24	838	67.58
103	17	Agra university journal of research	03	0.24	841	67.82
104	17	Agric.Res.j.kerala	03	0.24	844	68.06
105	17	Agricultural journal of india	03	0.24	847	68.30
106	17	Agriculture mediterania	03	0.24	850	68.54

107	17	Alexandria journal of Agricultural research	03	0.24	853	68.79
108	17	American j.botany	03	0.24	856	69.03
109	17	Indian j.botany	03	0.24	859	69.27
110	17	Annual Mycology	03	0.24	862	69.51
111		89 journals Cited 2 times 89*2=178	178	14.35	1.040	83.87
112		200 journals Cited 1 time 200*1=200	200	16.12	1.240	100
Total			1,240	100		

T5 shows that Ranking of Periodicals. A total of 1,240 Journal articles are identified out of which 168(13.54%) are published from "Phytopatholohy" followed by 60(4.83%) are from "Indian phytopathology", 46(3.70%) are from "Plant Disease" and so on.

Table : 6 Age wise distribution of journal citations.

Sl. No	**Years**	**No. of years**	**No. of Citations**	**%**
1	2001-1991	10	327	26.38
2	1990-1980	10	426	34.35
3	1979-1969	10	257	20.72
4	1968-1958	10	110	8.88
5	1957-1947	10	049	3.95
6	1946-1936	10	036	2.90
7	1935-1830	105	035	2.82
	Total		1,240	100

T6 shows that Age wise distribution of journal references out of 1,240 citations there are 426(34.35%) were highest from the period "1990-1980" followed by 327(26.38%) citations

from the period “2001-1991”, 257(20.72%) citations are from the period “1979-1969”, and 110(8.88%) citations from the period “1968-1958” and so on.

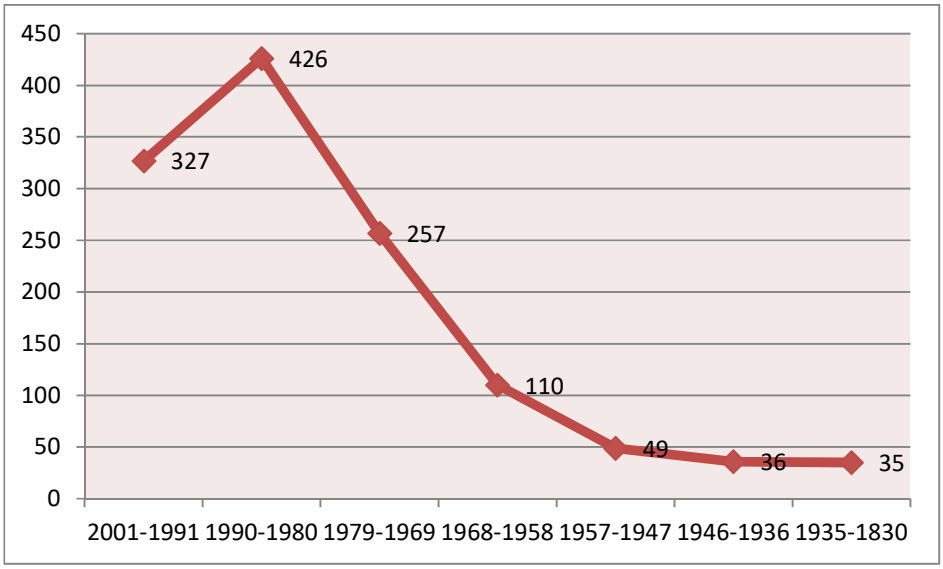

Fig.7 Age wise journal citations distribution.

6. Findings and dissuasions of the study

✓ It is observed in T2 that Average number of Citations in each doctoral thesis the total of 11 doctoral thesis there were called 2,211 References. Their average references in each thesis is 201% .

✓ It is observed in T3 that Types of documents cited by researchers. A total of 2,211 references there are 1,240(56.08%) references from “Journal Articles”, Followed by 439(19.86%) are from “Conference proceedings”,123(5.57%) are from “Thesis and Dissertations”, 390(17.64%) are from “Secondary Sources”, 6(0.27%) are from “Electronic Sources” and 13(0.58%) are from “Incomplete references”.

✓ It is observed in T4 that Authorship pattern of references. A total of 1,240 references there are 240(19.35%) references are from “Single Author” and 1,000(80.65%) are from “Multi Authors”.

✓ It is observed in T5 that Ranking of Periodicals. A total of 1,240 Journal articles are identified out of which 168(13.54%) are published from “Phytopatholohy” followed by 60(4.83%) are from “Indian phytopathology”, 46(3.70%) are from “Plant Disease” and so on.

✓ It is observed in T6 that Age wise distribution of journal references out of 1,240 citations there are 426(34.35%) were highest from the period "1990-1980" followed by 327(26.38%) citations from the period "2001-1991", 257(20.72%) citations are from the period "1979-1969", and 110(8.88%) citations from the period "1968-1958" and so on.

Discussions

A total of 2,211 references there are 1,240(56.08%) references from "Journal Articles", Followed by 439(19.86%) are from "Conference proceedings",123(5.57%) are from "Thesis and Dissertations", 390(17.64%) are from "Secondary Sources", 6(0.27%) are from "Electronic Sources" and 13(0.58%) are from "Incomplete references". 240(19.35%) references are from "Single Author" and 1,000(80.65%) are from "Multi Authors" 168(13.54%) are published from "Phytopatholohy" followed by 60(4.83%) are from "Indian phytopathology", 46(3.70%) are from "Plant Disease". study is limited to "*An analysis of Doctoral thesis, of phytopathology and titles word linkage : A Scientometric Study"*. The present Data has been collected from Krishikosh Website. The technique of citation is adopted for the study there are 11 doctoral thesis and their 2,211 citations are analyzed according to citation method. The collected data are tabulated presented, analysis and interpreted with the help of tables and graphs.

7. Conclusion

The present research study conclude that A Scientometric Study of phytopathology it covers 2,211 citations from 11 doctoral theses. Data was collected from Krishikosha website after collecting data the data has been entered in MS Excel sheet According to AACR2 cataloguing code. and presented in tables and graphs. there are 1,240(56.08%) references from "Journal Articles", Followed by 439(19.86%) are from "Conference proceedings",123(5.57%) are from "Thesis and Dissertations". This study is very help full to research scholar and academicians to development of their research in the field of phytopathology and also library and information science field. Finally this research paper concluded that the scholars were citing more documents, and journals in their field and also majority of the researchers were citing in the field of phytopathology by using of databases and so on.

8. Author Declaration

Dr.Amaravathi.V declares that this article entitled **"An analysis of Doctoral thesis of phytopathology and titles word linkage :A Scientometric Study"** Submitted by me in partial fulfillment of my research. I, further declare that I have not previously published this article in any other journals/ conferences and so on.

References

1. De Solla Price, D., (1978) *editorial statement*. Scientometrics 1,(1)
2. Dean, Douglas L; Lowry, Paul Benjamin and Humpherys, Sean (2011). "Profiling the research productivity of tenured information systems faculty at U.S. institutions". *MIS Quarterly*. 35 (1), 1–15.
3. Elena Vadimovna Alikina, Elena Leonidovna Kavardakova and Liudmila Veniaminovna Kushnina (2016) Scientometric Study of Russian Research into Translation/ Interpreting Pedagogy. International Review of Management and Marketing 6(S3), 182-189.
4. Garfield, Eugene (2009). "From the science of science to Scientometrics visualizing the history of science with HistCite software". *Journal of Informetrics*. 3 (3): 173–179.
5. Gayan, Mithu Anjali and Sanjay Kumar, Singh (2021) "Citation analysis of Mathematics: a scientometric study based on PhD theses, Tripura University". Library Philosophy and Practice (e-journal). 5
6. Gerhard A. Wührer, Zeynep Bilgin F. and Elif Karaosmanoğlu (2011) The Development and Transfer Of Scholarly Marketing Thought In Turkey: A Scientometric Analysis Of Master And Phd Theses 1980 – 2008 In An Emerging Market Country, The Journal Of Knowledge Economy & Knowledge Management, Vi.
7. Haydar Yalcin, Wanying Shi and Zafrin Rahman(2020) A Review and Scientometric Analysis of Supply Chain Management (SCM),Operations And Supply Chain Management. 13(2),123 – 133.
8. Islam, Md. Nazmul, Islam, Md. Shariful and Roy, Partha Biplob (2021) "Scientometric Analysis of Public Health Literature: A Study based on Scopus Database". Library Philosophy and Practice (ejournal). 5105.

9. Karuga, Gilbert G, Lowry, Paul Benjamin, Richardson, Vernon J. (2007). "Assessing the impact of premier information systems research over time". *Communications of the Association for Information Systems*. 19 (7): 115–131.
10. Leydesdorff,L. and Milojevic, S., (2013) "Scientometrics" forthcoming in: Lynch, M. (editor), *International Encyclopedia of Social and Behavioral Sciences* subsection 85030.
11. Lowry, Paul Benjamin; Karuga, Gilbert G.; Richardson, Vernon J. (2007). "Assessing leading institutions, faculty, and articles in premier information systems research journals". *Communications of the Association for Information Systems*. 20 (16): 142–203.
12. Lowry, Paul Benjamin; Moody, Gregory D.; Gaskin, James; Galletta, Dennis F.; Humpherys, Sean; Barlow, Jordan B.; and Wilson, David W. (2013). "Evaluating journal quality and the Association for Information Systems (AIS) Senior Scholars' journal basket via bibliometric measures: Do expert journal assessments add value?," 37(4), 993–1012.
13. Mithu Anjali Gayan (2018) Citation Analysis of Doctoral theses of Mathematics, Tripura University: a Scientometric study. International Journal of Library Information Network and Knowledge. 3 (2).
14. Nazarov, Pavel A.; Baleev, Dmitry N.; Ivanova, Maria I.; Sokolova, Luybov M.; Karakozova, Marina V. (2020). "Infectious plant diseases: etiology, current status, problems and prospects in plant protection". *ActaNaturae*. 12 (3):46–59.
15. Nishtha Anilkumar (2010) Scientometric Study of Doctoral Theses of the Physical Research Laboratory. Library And Information Services In Astronomy VI ASP Conference Series, (433).
16. Oliver, Richard, ed. (2024). *Agrios' plant pathology* (6th.ed) Amsterdam: Academic Press.
17. Payel Goswami, Sucheta Bhattacharjee and Sudip Bhattacharjee (2024) Global research contributions on orchids: A scientometric review of 20 years. Journal of Applied Biology & Biotechnology. 12(3), 268-275,
18. Pranav Waila, Vivek Kumar Singh and Manoj Kumar Singh (2016) A Scientometric Analysis of Research in Recommender Systems. J Scientometric Res. 5 (171).

19. Sudhier, K.G. Pillai and Kumar, V. Dileep, (2010) "Scientometric Study of Doctoral Dissertations in Biochemistry in the University of Kerala, India". Library Philosophy and Practice (e-journal). 398.
20. Yu-Wei Chang (2012) Tracking Scientometric Research in Taiwan Using Bibliometric and Content Analysis. Journal of Library and Information Studies 10 (2), 1-20.
21. https://krishikosh.egranth.ac.in/disclaimer