SOME CHARACTERISTICS OF ARTICLES PUBLISHED IN THE NIGERIAN JOURNAL OF ANIMAL PRODUCTION

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ABSTRACT

Using the articles published in the volume 10-14 (1983-1987) of the *Nigerian Journal of Animal Production* (NJAP), articles profiles and authors' livestock training background were determined. Eighty-one (81) out of 226 were single authored and the balance authored by two or more people. Twelve (12) authors represents the 'core authors' of the journal. This figure appears rather low, from a total of 226 authors. Poultry production is the most authored field in animal production studies; while Nsukka, Zaria, Ibadan and Vom produced the highest number of animal scientists that authored the articles in the volumes 10-14 of NJAP. This group accounts for more than 74% of the institutional affiliation of authors to the journal.

INTRODUCTION

Information on the characteristics of the literature of any subject field is a useful bibliographic tool for both librarians and researchers (Martyn, 1975). The significance of the study of the characteristics of works contained in a publication lies in the fact that it contributes to the understanding of, and insight into that subject.

Okanlawon (1984) on characteristics of veterinary medicine literature observed that an understanding of certain basic characteristics of the literature of the subject has many important contributions to make to the improvement of acquisition and bibliographical control of that literature. The need for bibliographic control through proper examination, documentation and organisation, and the retrieval of literature in a group field like animal production in Nigeria cannot be over-emphasized. Saracevic and Perk (1973) sees literature analysis as fundamental to all other analyses.

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It is difficult to determine all the characteristics of a subject field, because they are too numerous, and they do not lend themselves easily to assessment. However, the most commonly used methods: Citation analysis, abstract analysis, and the analysis of a compiled bibliography still have their inherent shortcomings. For instance, the first method of analysis is not comprehensive enough, as not all that is published or read ever gets cited; the second method has its bias towards journals and periodicals, meaning that materials published outside these medium never get abstracted in an abstract analysis.

Applying some of these accepted methods of literature analyses to the *Nigerian Journal of Animal Production* (NJAP), the following objectives have been chosen for analyses:-

1. Identify the authors contributing to the *Journal*.
2. Reveal the strength of such authors through a ranked list of an author productivity
3. Determine the "Core-Author to the journal.
4. Examine the status of article published in terms of being joint or multiple
5. Examine the specie scatter of the articles.

The basic limitation of the study in this direction is that only five volumes (i.e Vol. 10-14; 1983-87) of the *Journal*. were analysed.

MATERIALS AND METHODS

The sources of data for this study were the articles published by the *Nigerian Journal of Animal Production* (NJAP) during the years 1983 - 1987; i.e Volumes 10-14. The choice of time span was dictated by convenience. Publishing of the *Journal* started in 1974, but publication was not as regular as it should be.

TABLE 1. DISPERSION OF ARTICLES AMONG SPECIES IN VOL. 10-14 AND STATUS OF ARTICLES.

Species	Article No.	Status	
		Single	Joint
Poultry Production	79	31	48
Cattle Production	37	11	26
Swine Breeding and reproduction	28	11	17
Small Ruminants research	28	11	17
Feed, Forage development and crop residue	17	3	14
General livestock studies	17	6	11
Dairy Research	11	4	7
Rabbitry Research	7	2	5
Snail Breeding	2	2	-
Total	226	81	145

Publication from 1983-1987 were however regular.

For every article published in each issue, an index card was made. Such information as below were noted on the card:

- (i) The name(s) of the author(s)
- (ii) The address of the author(s)
- (iii) Title of article including date
- (iv) Species treatment of article.

Attempt is made at identifying each author so as to enable his professional background in the industry to be determined. Hence, authors with B.Sc, M.Sc, etc prefix were noted from their veterinary colleagues.

For all cases of joint authorship, the address of the first author determines the address for the article. For articles in which the authors are addressed locally and foreign, the Nigerian address was recorded. All institutions attached to Universities were recorded under the Univer-

sity. For the purpose of the present study, presidential, opening and Governor's addresses were ignored.

RESULTS AND DISCUSSION

Two hundred and twenty-six (226) articles were published in the 5 volumes used for this study. 81 of these articles were single authored while the remaining 145 were joint authored articles. This discovery tallies with earlier works carried out by Price in 1963 and Clerke in 1964. They agreed that modern scientific paper trend is towards multiple authorship than individual. Price (1963) concludes that the trend towards multiple authorship is a phenomenon which has been increasing steadily and ever more rapidly since the beginning of this century.

Further exposition on the articles show that they can be classified under the following subject treatises: poultry production, swine or piggery, small ruminants, cattle, snail and rabbitry. Others are forage development and crop residue, dairy development, animal reproduction, and others that are of general nature. The number of article dispersion per class is as shown in Table 1. There were very few publications on snail and rabbits research in the journal as there are 2 and 7 articles respectively.

Table 2 shows the institutional affiliations of the authors of the articles. The picture one sees from this table is that the older livestock training institutions; Viz:- Ahmadu Bello University, Zaria; University of Nigeria, Nsukka; University of Ibadan; and the Nigerian Veterinary Research Institute, Vom account for 175 of the total published articles. This is more than 74% of the total articles used for the studies.

A survey of the authors show that from 226 authors, 61 are veterinarians by training, while the remaining 165 are animal scientists and technologists. This author is able to know this far by his personal knowledge of the authors and a cross-check from peers of the authors.

Table 3 shows the core authors to be I.F.Adu, with 9 articles A.B. Udedibe, with 8 scores; and B. I. Orji with 6 scores. Nine other authors had 5 scores each.

TABLE 2. INSTITUTIONAL AFFILIATION OF AUTHORS

Institution	No. of Authors
1. University of Nigeria, Nsukka	54
2. Ahmadu Bello University	51
3. University of Ibadan	37
4. Veterinary Research Institute, Vom	33
Federal University of Technology,	
5. Owerri	10
6. Scattered addresses in the U.S.A.	9
7. University of Maiduguri	8
8. Rivers State University of Technology (Incl. Uniport)	7
9. Kainji Lake Research Institute, New Bussa	6
10. Obafemi Awolowo University, Ile-Ife.	5
11. Scattered addresses in Australia	3
12. University of Ilorin	3
13. Federal University of Technology, Makurdi	3
14. Bendel State University, Ekpoma.	2
15. Federal University of Technology, Yola	2
16. Federal University of Technology, Akure	1
17. Nigerian Institute of Trypanosomiasis Research, Kaduna	1
18. United Kingdom (U.K)	1

An identification of the "core authors" within any given discipline provides a good tool for acquisition. Libraries will tend to limit their selection based on articles authored by such "core authors" as this is a ready tool to librarians for acquisition during cuts in book budget. "Core authors" also enable researchers gain access to the appropriate information in their disorganised state. Finding the "core authors" from Table 3 posed the question of which formula to employ. Bradford was interested in finding out the most useful journals for a field as far back as 1948; and thus arranged the journals into a list with the most productive numerically at the top followed by the next most productive and so on. He reasoned that at the end of the day, those at the top would form a nucleus of most useful sources

for that subject field. This top nucleus was later referred to as the "Core Journal". The emerging table was later transformed into a graph which has won the hearts of bibliometricians. This graphic formulation of the Bradford's law is more consistent with practical situation. Andrew Pope (1975) in accepting the superiority of this graphical analysis to other methods writes "realising the fact that not all bibliographies are complete, potentials for application should be considered and these criteria if applied will make graphical analysis superior. Toye (1976) and Aiyepoku (1973) applied the core principle to the study of core authors in Entomology and Geography respectively. This paper will do the same with Animal Science. Fig 1. shows that the first twelve authors with 5 to 9 articles constitute the 'core authors' of the *Nigerian Journal of Animal Production*. These authors are I. F. Adu, A. B. I. Udedibie, B. I. Orji, K. L. Ayorinde, B. L. A. Fetuga, J. A. Ibeawuchi, S. A. Ikurior, A. U. Kalu, F. C. Obioha, G. C. Okeke, B. N. Okwuosa; and E. Nwokolo. These twelve authors produced 68 articles representing 30.68% of the total articles.

Fig. 1. Bradford bibliography for core authors.

TABLE 3. RANKED LIST OF AUTHOR PRODUCTIVITY IN THE *NIGERIAN JOURNAL OF ANIMAL PRODUCTION* VOL. 10-14

Author	Productivity	Author	Productivity
1. I. F. Adu	9	45. D. V. Uza	3
2. A.B.I. Udedibie	8	46. I. A. Abdulkadir	2
3. B. I. Orji	6	47. I. O. Adeleye	2
4. K. L. Ayorinde	5	48. J. O. Akinola	2
5. B.L.A. Fetuga	5	49. A. O Akinsoyinu	2
6. J. A. Ibeawuchi	5	50. M. Akpapunam	2
7. S. A. Ikurior	5	51. O. Alaku	2
8. A. U. Kalu	5	52. B. O. Asuquo	2
9. F. C. Obioha	5	53. S. T. O. Atta	2
10. G. C. Okeke	5	54. G. O. Azubuike	2
11. B. N. Okwuosa	5	55. A. K. Chatterjee	2
12. E. Nwokolo	5	56. C. N. Chineme	2
13. A. M. Agbakoba	4	57. K. Dobel	2
14. S. S. Ahmed	4	58. L. O. Eduvic	2
15. F. O. I. Anugwa	4	59. O. W. Ehoche	2
16. J. S. O. Ayeni	4	60. C. A. Enunwaonye	2
17. O. W. Ehoche	4	61. B. C. Ezieke	2
18. L.S.O. Ene	4	62. T. A. Gbodi	2
19. T. N. Kamalu	4	63. E. s. Haruna	2
20. C. A. M. Lakpini	4	64. G. Igoeli	2
21. M. C. Njike	4	65. M. U. Iloeje	2
22. C. C. Nwosu	4	66. J. O. Jegede	2
23. S. A. Offiong	4	67. U. S. Krishnamurthy	2
24. N. A. Okaeme	4	68. A. S. Kwatu	2
25. H. E. Okereke	4	69. S. Legel	2
26. J. M. Olomu	4	70. E. A. Lufadeju	2
27. E. B. Sonaiya	4	71. K. A. Majiyagbe	2
28. T. S. B. Tegbe	4	72. A. U. Mba	2
29. E. A. Adebawale	3	73. L. A. Murray	2
30. T. A. Adegbola	3	74. A. Naibe	2
31. J. A. Adeneye	3	75. D. R. Nawathe	2
32. A. M. Balogun	3	76. L. O. Ngere	2
33. V. Buwanendran	3	77. D. O. Nnanyelugo	2
34. M. Czerski	3	78. A. N. Nnodim	2
35. U. J. Ikhatua	3	79. B. O. Nwegbu	2
36. O. A. Ikwegbu	3	80. C. I. Nwosuh	2
37. T. N. Kamala	3	81. F. C. Obioha	2
38. G. W. Kulasek	3	82. S. I. Obaegbulem	2
39. F. N. Madubuike	3	83. O. O. Ogunsiji	2
40. M. C. Njike	3	84. O. O. Okoli	2
41. P. C. Njoku	3	85. S. Okon	2
42. A. U. Okorie	3	86. L. A. Oladosu	2
43. A. D. Ologhobo	3	87. O. Onwubiko	2
44. S. A. S. Olorunju	3	88. A. Onwubuya	2

TABLE 3 CONT'D

Author	Productivity	Author	Productivity
89. O. A. Osinowo	2	135. T. A. Bamiduro	1
90. T. Ogunjimi	2	136. K. Benyi	1
91. E. O. Oyedipe	2	137. J. G. Buchanan-Smith	1
92. D. Patric	2	138. S. N. Carew	1
93. D. I. Sarror	2	139. L. E. Chase	1
94. A. A. Sekoni	2	140. H. R. Chheda	1
95. B. O. Shodipo	2	141. C. R. Chuta	1
96. I. A. Ukwani	2	142. P. N. Chidebe	1
97. J. E. Umoh	2	143. Y. Chiejina	1
98. N. N. Umunna	2	144. G. A. O. Chuke	1
99. G. E. S. Williams	2	145. I. Dafwang	1
100. S. N. Abana	1	146. K. B. David-West	1
101. A. M. Adamu	1	147. B. H. Davies	1
102. O. A. Adebambo	1	148. P. M. Dawuda	1
103. V. O. Adebambo	1	149. P. N. de-Leeuw	1
104. J. O. A. Adeleye	1	150. N. Dim	1
105. Y. M. Adesipe	1	151. H. U. Edegere	1
106. A. A. Adesiyun	1	152. H. L. Enos	1
107. A. A. Adewuyi	1	153. E. E. Erojikwe	1
108. S. A. Adeyanju	1	154. K. A. N. Esievo	1
109. A. A. Adeleye	1	155. B. O. Esonu	1
110. A. O. Adogwa	1	156. A. O. Ezech	1
111. E. C. Agishi	1	157. C. D. Ezeokoli	1
112. F. N. Agamoh	1	158. N. E. Ezekiel	1
113. W. E. Agu	1	159. K. Fuleye	1
114. J. A. Agunbiade	1	160. I. J. Fulani	1
115. M. E. Akenova	1	161. S. A. Garba	1
116. M. Akande	1	162. A. O. Gbankoto	1
117. K. E. Akinuli	1	163. A. Ghaji	1
118. O. Akinokun	1	164. F. Goween	1
119. A. A. Akinyemi	1	165. U. Henry	1
120. I. A. Akpan	1	166. J. K. M. Hodasi	1
121. F. Alafiatayo	1	167. J. O. Igene	1
122. V. A. Aleter	1	168. M. M. Ikeme	1
123. W. S. Alhassan	1	169. A. A. Ilemobade	1
124. P. O. Anagor	1	170. A. O. Idufueko	1
125. V. O. Anosa	1	171. A. G. Jagun	1
126. B. M. Anene	1	172. A. O. Johnson	1
127. L. A. O. Asye	1	173. R. A. Joshua	1
128. A. A. Awah	1	174. S. A. Kayit	1
129. M. O. Awogbade	1	175. O. O. Komolafe	1
130. P. O. Azike	1	176. M. Kownacki	1
131. Z. T. Bajeh	1	177. R. Krzemnski	1
132. E. A. Balogun	1	178. J. Kumi-Diaka	1
133. A. O. Bello	1	179. G. W. Kulasck	1
134. S. I. Bello	1	180. O. Kumuyi	1

TABLE 3 *CONT'D*

Author	Productivity	Author	Productivity
181. G. G. Kwanashie	1	204. C. Okere	1
182. O. A. Leigh	1	205. P. N. Okah	1
183. O. Longe	1	206. M. I. Okolo	1
184. E. C. Luswetti	1	207. A. O. Okunyiba	1
185. F. N. Madubuike	1	208. E. A. Olalokun	1
186. S. A. Manigni	1	209. M. B. Olayiwole	1
187. J. McGaugh	1	210. B. A. Olufemi	1
188. I. Mecha	1	211. O. Olumide	1
189. A. Monsi	1	212. J. O. Onamegbe	1
190. W. E. Moore	1	213. O. O. Oni	1
191. L. I. Ndife	1	214. O. S. Onifade	1
192. D. A. Ngoka	1	215. F. O. Oluajo (U. I.)	1
193. A. Nlube	1	216. G. I. Onuora	1
194. L. N. Nwakalor	1	217. B. A. Opasina	1
195. E. A. Obot	1	218. S. O. Orgu	1
196. V. M. Ofoube	1	219. B. I. Orji	1
197. E. A. Ogbona	1	220. M. O. Oyatogun	1
198. G. A. Ogbonah	1	221. N. Pathiraja	1
199. O. A. Chajanuka	1	222. J. Piotrowski	1
200. O. O. Ojo	1	223. J. T. Raid	1
201. J. O. A. Okase	1	224. A. H. Sykes	1
202. M. U. Okeagu	1	225. W. P. Taylor	1
203. A. I. Okeke	1	226. c. O. Ubosi	1

TABLE 4. TABLE OF DISTRIBUTION OF AUTHORSHIP IN THE VOL. 10-14

Frequency Productivity of authors	No of Authors	Cumulation of authors	Cumulation frequency of authors	Log of Authors
9	1	1	9	0.006
8	1	2	17	0.301
6	1	3	23	0.477
5	9	12	68	1.079
4	16	28	132	1.447
3	17	45	183	1.653
2	54	99	291	1.959
1	127	226	418	2.302

CONCLUSION

The evidence generated permits some cautious general conclusion on the reliability of characteristic studies to library services. The use of periodicals in animal science, like in any other scientific discipline, is paramount to research and development. This is why the interest in periodical-based materials has continued to grow as a result of an increase in the intensity of research in this area.

The author ranking produced in Table 3 makes it possible for new scientists in the field of animal production to identify pioneers in the industry, and thereafter search for the works of such authors. Librarians could also use such list as their reference base in literature disposition.

The *Nigerian Journal of Animal Production* has come of age. The abstracts, often not more than one or two paragraphs are sufficiently informative. The articles published also reflect the comprehensiveness of the subject matter. The journal would however boost its openness by publishing materials on bibliometrics.

Very little is published on snail and rabbitery research, and the journal should endeavour to solicit for articles in these areas through its publishers, the Nigerian society for animal production.

The age of cited reference by the authors in their articles reveal an acute dearth of current books and journals in our libraries. Author's references were mostly from publications of the sixties, and at best early seventies. The implication of this to science and technology in a developing industry as animal production cannot be overlooked. Librarians must therefore look for other means of acquisition outside direct purchase.

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