

Characterisation of Publications in Nigerian Society for Animal Production Conference: 1. Books of Abstracts

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Abstract: A study was conducted to characterize papers presented at the Nigerian Society for Animal Production (NSAP) conferences from 1991 to 1997. Data were obtained from published abstracts in NSAP books of abstracts and analyzed by descriptive statistics. The results showed that a total of 1261 papers were presented during the seven-year period. Presentation based on content include scientific research, case reports, reviews and surveys which recorded 775 (61.5%), 45 (3.6%), 248 (19.7%) and 193 (15.3%) abstracts, respectively. Based on specialty, animal nutrition and management (ANM) gave the highest paper presentation with 494 (39.2%) abstracts, while the least was animal biotechnology (AB) with 3 (0.2%) abstracts only. According to species, poultry took the lead with 396 (31.4%) abstracts, while manatees, bees, bush hare, crab, periwinkle and cats had the least with only 1 abstract each. Presentation based on type of animal include ruminant, monogastric and mixed animals, microlivestock and the unclassified group which recorded 397 (31.5%), 502 (39.8%), 75 (5.9%), 140 (11.1%) and 146 (11.6%) abstracts, respectively. Poultry research was given more priority by NSAP scientists and monogastric animals were mostly studied. Animal nutrition and management received much attention than any specialty of animal production. NSAP scientists conducted more of scientific research during the seven-year period. It is, therefore, recommended that NSAP members should endeavour to attract attention of young scientists toward building a career in neglected specialties and species through hosting of career talks, shows and exhibitions, enhancement of mentorship and further training.

Key words: Abstract • Animal production • Conference • Nigerian Society for Animal Production • Presentation

INTRODUCTION

The Nigerian Society for Animal Production (NSAP) was inaugurated in March 1973 during the first International Symposium of Animal Production at the University of Ibadan, Nigeria [1]. The Society organise conferences annually, in March, which takes place at different institutions in different states of the Federation on a rotational basis. Presentation at NSAP conferences held between 1974 and 1997 were published as books of

abstracts given to the participants during or after the conference. In 1998, the Society switched to books of proceedings as the official publication of its annual conferences.

A lot of time, energy and resources are invested in conducting research. One of the objectives of NSAP is the dissemination of information on animal science and sound development of livestock production through exchange of research results. A forum for sharing such information is the Society's annual conferences. How has

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this awareness fared in line with the objectives of the Society? An analysis of presentations at NSAP conferences will go a long way in providing information on gaps in research, identifying specialties that have received the greatest attention and enabling effort to be directed at neglected specialties. This information might be useful in setting up research agenda in animal science and encouraging the growth of specialties in which NSAP members seem to be less involved.

The present study was, therefore, aimed at classifying paper presentation at NSAP conferences between 1991 and 1997 on the basis of content, specialty, type of animal and species.

MATERIALS AND METHODS

Materials: All abstracts in the books of abstracts of the Nigerian Society for Animal Production (NSAP) conferences between 1991 and 1997 formed the basis of this work. The books were sourced partly from active members of the Society and partly from institutional libraries.

Methods: All abstracts published in the books of abstracts of the Nigerian Society for Animal Production (NSAP) conferences between 1991 and 1997 were counted and classified based on the following criteria.

Content: Abstracts were classified based on content according to the following criteria.

Case Report: These are detailed reports of diagnosis, treatment and follow up of patient [2]. It includes information like age, breed, sex, clinical signs and doctor's comment; mostly reporting cases of incidence of disease in animals.

Scientific Research: These are systematic observation of phenomena for the purpose of learning new facts or testing the application of theories to known facts [3], example research works conducted in the laboratory and field experiments.

Survey: These are the collection of data from a given population for the purpose of analysis of a particular issue [4] In this type of study, data is often collected from only a sample of a population. An example is an abstract that involves the use of questionnaires for data collection over a period of time.

Review Paper: The abstract summarizes the current state of knowledge of the topic by synthesizing the results from several literatures to produce a coherent argument about a topic or focused description of a field [5].

Specialty: Abstracts were classified based on various areas of specialization in animal production on which studies were conducted. They include: animal health (AH); animal biotechnology (AB); animal breeding and genetics (ABG); Animal nutrition and management (ANM); animal production systems (APS); microlivestock production (MP); livestock products and processing (LPP); rural sociology, livestock economics and extension (RSLEE); pasture production and range management (PPRM); animal waste management (AWM); and wildlife management and production (WMP). This classification was based on the objectives of the abstracts, not necessarily based on the classification adopted in the respective books of abstracts.

Type of Animal: Classification was done as stated below.

Ruminant Animal: Any cud-chewing ungulate, including antelope, camels, cattle, deer, giraffes, goats, okapis, pronghorn and sheep [6].

Monogastric Animal: These are animals having only one digestive cavity [7]; examples include dogs, cats, rats, poultry, e.t.c.

Microlivestock/Minilivestock: Many small animals, vertebrates and invertebrates, homiotherms (endotherms) and poikilotherms (ectotherms), used by man since he gathers, hunts or collects them in the wild, bred under controlled conditions in captivity, little known in animal production and having a potential benefit either nutritionally for food or economically for animal-feed or revenue and currently not being utilized to their full potential [8]. Examples include, but not limited to, rodents, guinea pig (*Cavia porcellus*), giant African land snails, annelids (living in litter and manure convert vegetable refuse to animal protein which can be used as feed for pigs and poultry), frogs, insects, e.t.c.

Unclassified/General: In this case, animals were not the focus of the abstract or the abstract was of a general nature.

Mixed Type: This is where an assortment of animals were the focus of the study; example an abstract that report findings on ruminant and monogastric animals together.

Species of Animals: Abstracts were classified based on species as goat, sheep, cattle, camel, e.t.c.

The data was collected after each abstract was read thoroughly and extractions were made for each year. The total for the year was recorded and the total number of abstracts between 1991 and 1997 was collated and analyzed using descriptive statistics. The data herein is presented without quoting names, provinces, institutions or regions.

RESULTS

Distribution of Paper Presentation by Conference Year:

Figure 1 presents the distribution of NSAP conference paper presentation by year. A total of 1261 papers were presented at NSAP conferences between 1991 and 1997. The year with the highest number of paper presentation was 1997 with 299 abstracts representing 23.7% of the total. It was followed by 1993 and 1996 with 217 (17.2%) and 212 (16.8%) abstracts, respectively. The year with the least number of paper presentation was 1994 with 103 (8.2%) abstracts. In the intermediate category was 1995 with 176 (14.0%) abstracts.

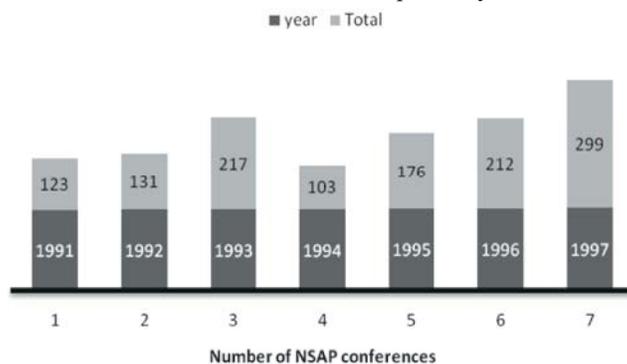


Fig. 1: Distribution of NSAP conference paper presentation by year (1991-1997)

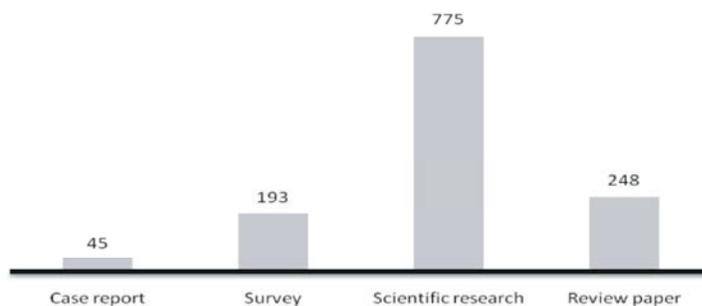


Fig. 2: NSAP conference paper presentation by content (1991-1997)

Distribution of Paper Presentation by Content:

Figure 2 presents a seven-year distribution of papers presented at NSAP conferences by content. Scientific research had the highest number of presentation with 775 (61.5%) abstracts followed by reviews which had 248 (19.7%) papers, then by survey and case reports with 193 (15.3%) and 45 (3.6%) abstracts, respectively.

Distribution of Paper Presentation by Specialty:

Figure 3 presents a seven-year distribution of papers presented at NSAP conferences by specialty. The specialty of animal nutrition and management contributed a total of 494 (39.2%) abstracts during the seven-year review period. Abstracts on animal biotechnology (AB), animal waste management (AWM), animal production systems (APS) and wildlife management and production (WMP) constituted 2.2% of papers presented. Animal breeding and genetics (ABG), animal health (AH), animal physiology and reproduction (APR), livestock products and processing (LPP), microlivestock production (MP), pasture production and range management (PPRM) and rural sociology, livestock economics and extension (RSLEE) contributed 82 (6.5%), 160 (12.7%), 114 (9.0%), 62 (4.9%), 53 (4.2%), 67 (5.3%) and 201 (15.9%) abstracts, respectively.

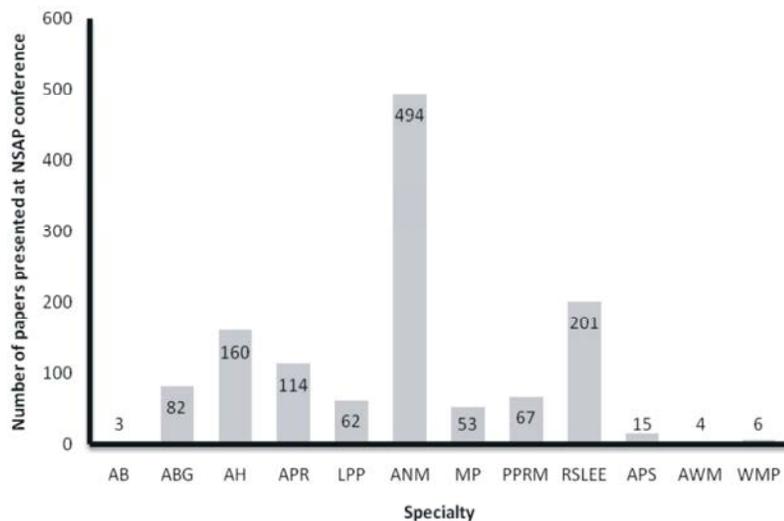


Fig. 3: NSAP conference paper presentation by specialty (1991-1997)

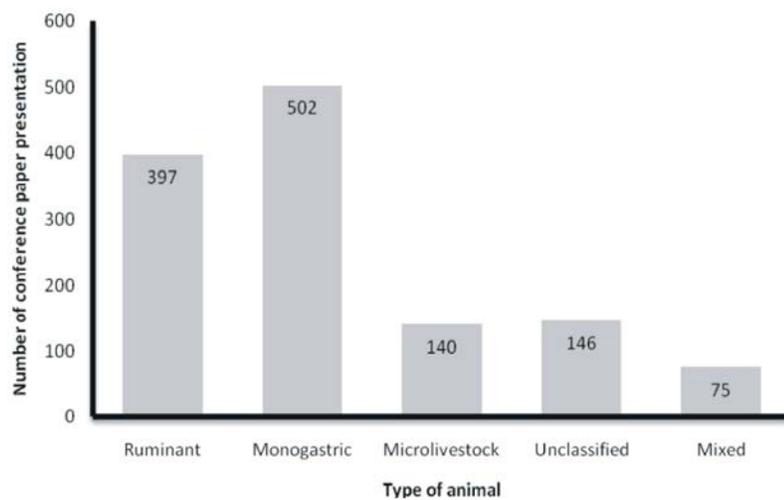


Fig. 4: NSAP conference paper presentations by type of animal (1991-1997)

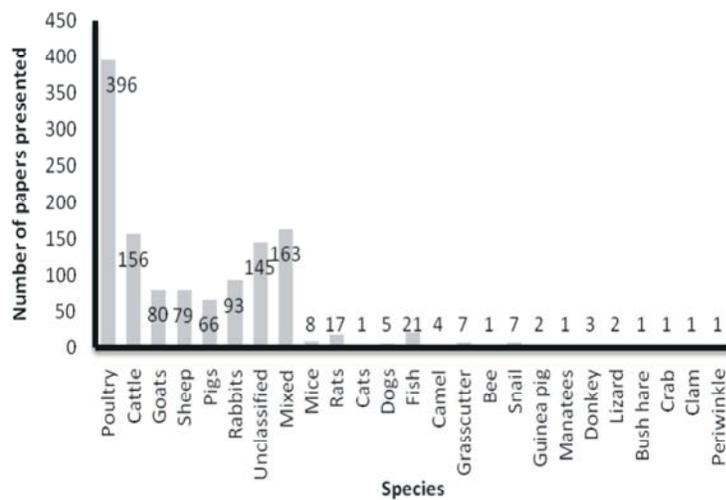


Fig. 5: NSAP conference paper presentations by species (1991-1997)

Distribution of Paper Presentation by Type of Animal:

Figure 4 presents a seven-year distribution of papers presented at NSAP conferences by type of animal. Monogastric animals led in paper presentation with 502 (39.8%) abstracts, followed by ruminant animals with 397 (31.5%) abstracts. The least presentation was the mixed animal category with 75 (5.9%) abstracts while microlivestock and the unclassified categories were intermediate with 140 (11.1%) and 146 (11.6%) abstracts, respectively.

Distribution of Paper Presentation by Species:

Figure 5 presents a seven-year distribution of papers presented at NSAP conferences by species of animal. Manatees, bush hare, crab, clam, periwinkle, bee and cat had one (1) abstract each while lizard and guinea pig had two (2) abstracts each. Camel had 4 abstracts presented while snail and grasscutter had seven (7) abstracts each. Mice had eight (8) abstracts. The afore-mentioned species represent the least number of papers presented (2.9%) within the seven year period. Poultry (which includes all avian species) had the highest number of paper presentation with 396 (31.4%) abstracts. Paper presentation on cattle, mixed species category, non-species category, goats, sheep, rabbit and pigs recorded 156 (12.4%), 145 (11.5%), 163 (12.9%), 80 (6.3%), 79 (6.3%), 92 (7.3%) and 66 (5.2%) abstracts, respectively.

DISCUSSION

The number of abstracts classified as scientific research remained high throughout the seven-year period. This could possibly be due to interest shown by most animal scientists and researchers in making breakthrough in their specialties with a view to laying solid foundation for scientific excellence. The steady increase in presentations between 1991 and 1993, the sharp decline in 1994 and the increase recorded between 1995 and 1997 could be attributed to the location or venue of the conference, the publicity and/or the number of participants that showed interest in a particular conference year. The field of animal nutrition and management had the highest number of presentation which probably could be due to the fact that studies on nutritional requirements are of less duration to yield applicable results than in breeding, health and disease control [9].

The least paper presentation was recorded on animal biotechnology (AB), animal waste management (AWM) and wildlife management and production (WMP). Biotechnology is being used to develop new medical and

veterinary diagnostic tests, genetically engineered vaccines for human and animal diseases, therapeutic agents, food and feed production [10]. Animal biotechnology or molecular biology research in the past two decades have brought a revolution in the emergence of new techniques such as high throughput DNA sequencing, microarray, nuclear transfer, RNA interferences and mass spectrometry-based proteomic techniques [11]. These new technologies make it possible to sequence the genome of animal species, carry out systematic genome-wide screens of gene functions and manipulate (delete, mutate, over express, or suppress) virtually any individual gene in the genome. Although most of these tools have yet to be utilized in animal agriculture, they are expected to have significant impact in the next 5-10 years [11].

Abubakar [12] illustrated the importance of animal waste as a means of generating biogas. Also, animals improve soil fertility through their manure [12]. Though the goal of using animal wastes for crop production is to improve environmental quality while at the same time maintaining a high farm income [13], not being able to harness the potentials in animal waste might be partly the reason for the low number of abstracts on animal waste management (AWM).

Wildlife management means controlling untamed animals [14]. Bush meat is an important source of food and income for many forest communities in Africa and beyond, but stocks of wild animals are dwindling [15]. The low number of abstracts on wildlife management and production (WMP) could be attributed to the lack of trained personnel and researchers, insufficient funds or lack of interest in this specialty, overdependence on conventional animals and techniques in management and production of wildlife species.

Livestock Products; meat, milk and fish, provide essential amino acids, minerals, vitamins and calories [16]. Processing of livestock products makes it possible to improve the quality and shelf-life of the products thereby increasing food safety. The low level of animal products in the diets of most Nigerians is largely as a result of the failure to adopt efficient modern processing technology with respect to the improvement of traditionally accepted animal products. This calls for enhanced research output in this specialty far more than what was reported in the current study.

The need for good pasture and rangeland is important in a ruminant production enterprise. When managed properly, good pastures and rangeland will provide a sustainable source of animal feed and reduce long distance wandering of animals in search of feed.

The importance of grassland agriculture cannot be overemphasized, thus, there is a need for involvement in research in this area despite the relatively small number of researchers engaged in this specialty.

The interest shown on animal health in the current study could be related to the urgent need to curb the menace of animal diseases and infections and to bring a lasting solution to the care of animals. National effort in disease control especially for major epidemics such as rinderpest, CBPP, PPR, Newcastle disease, etc have received governmental support since the 1950s because of the devastating effect on national herds and flocks [9]. There is a need for more effort in this direction because animal health is central to the wellbeing of the animal and touches on many aspects of animal production.

Animal protein consumer price have soared beyond proportions in recent years [17]. This problem translates for the ordinary Nigerian, especially rural dwellers into under-nutrition and malnutrition. Past failures of public policy on animal production have redefined the need for animal farming, particularly microlivestock production for improved rural household nutrition [17]. Venturing into microlivestock production was born out of the existing pressure on conventional animals such as poultry, cattle, sheep and goats; increasing pressure on land and recently urban agriculture. City dwellers cherish bush meat as it is popularly called and one of the most prominent animal that people have taste for and feature relatively regularly in their meals is Grasscutter (*Thryonomis swinderianus*) [18]. Urban agriculture entails limited space, thus smaller animals that are or have been domesticated with short gestation periods would be able to provide the needed source of protein required using the available scarce land.

Animal breeding and genetics (ABG) involves the improvement of farm animals and the utilization of the principles of genetics and breeding. Genetic gains once accrued tend to be permanent if judicious application is made of selection and breeding systems [19]. The improvement of animals needs a good knowledge of animal physiology and reproduction (APR) and a collaboration between the two specialties will help in achieving livestock improvement objectives. There is a need for increased research in these specialties as reflected in the results of the current study. Some factors possibly militating against the development of these specialties could be improper facilities, inadequate technical know-how required to carry out breeding work and longer duration to yield applicable results.

CONCLUSION AND RECOMMENDATIONS

Poultry research was given high priority during the period reviewed. Animal nutrition and management was, therefore, identified as the most studied specialty. NSAP members should endeavour to attract young scientists toward building a career out of neglected and emerging specialties such as animal biotechnology, animal waste management, wildlife management and production, animal breeding and genetics, animal physiology and reproduction and microlivestock production, through hosting career talks, shows, exhibitions and human resource development.

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