

OUR MANDATE

- a) Conduct research into all aspects of animal diseases, their treatment and control.
- b) Develop and produce animal vaccines, sera and biological to meet the national demand.
- c) Provide surveillance and diagnosis of animal diseases.
- d) To introduce exotic stock for improving egg, meat and milk production.
- e) Provide extension services and publications to poultry and livestock farmers.
- f) Train intermediate manpower in Veterinary and Medical Laboratory Technology and Animal Health and Production Technology

OUR MISSION

To be the foremost Veterinary Research Institute in Africa, producing international quality standard vaccines and offering services for the identification, control and eradication of economically important livestock diseases, through best practices, research excellence and applying modern technology, with highly motivated, trained and experienced personnel.

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PREFACE

In furtherance of the Federal Government Agricultural Transformation Agenda, the Institute has continued to generate technologies in the area of animal health through research and development. In 2014 efforts and resources were committed to research and development and these efforts yielded results which will contribute significantly to livestock development in Nigeria. Despite the daunting economic challenges in 2014, the Institute produced 79,258,747 doses of viral and 30,666,380 doses of bacterial vaccines, respectively.

To ensure global best practices in diagnosis and surveillance of livestock and zoonotic diseases of economic importance across the country, the Institute has established a BSL-3 Laboratory for highly pathogenic organisms. However, the laboratory is awaiting furnishing. Another milestone the Institute recorded this year is its nomination by Federal Ministry of Agriculture and Rural Development as the laboratory to conduct rabies serology for the purposes of export of dogs and cats. Though the nomination and recommendation was to the 28 member European Union, the application will benefit other nations.

In 2014, the Institute interacted and collaborated with International and local donor agencies including West Africa Agricultural Productivity Programme (WAAPP) with the purpose of generating technologies to increase agricultural productivity and the adoption of such technologies in Nigeria.

Training and retraining of staff for capacity building was vigorously pursued by the Institute at both national and international levels. In the year under review, 16 staff completed in-service training for certification and 26 more were approved for training in the same year. Seminar presentations were conducted by staff of the Institute on fortnightly basis and 12 of such presentations were held in 2014.

Unfortunately, the Institute also experienced brain drain in 2014. Six (6) reputable staff transferred their services to various universities in search of greener pasture.

In 2014 also, the Institute joined the Integrated Payroll and Personnel Information System (IPPIS) introduced by the Federal Government of Nigeria to prevent wastage and leakages of government funds. The Institute is struggling to stabilize with the system

With the level of commitment shown by staff and management and the firm support of the Federal Government, it is hoped that the coming year will provide greater opportunities for the fulfillment of the Institute's mandate.

Dr. M. S. Ahmed
Executive Director

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THE INSTITUTE'S BOARD MEMBERS



Dr Isaac Egboja – Board Chairman



Dr Ado Yusuf



Dr Abu M. Ataja



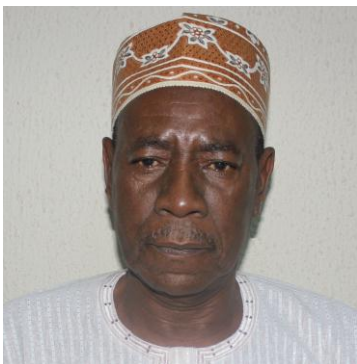
Mr. Nicholas Msheliza



Pastor Yusufu Alfa Tsenya



Alhaji Yusuf Mukhtar



Dr M.S. Ahmed EDVR, Vom



Dr Joseph Nyager (CVO)

INSTITUTE'S INTERNAL MANAGEMENT COMMITTEE MEMBERS



Dr D. Shamaki
(Director, Research)



Dr A. E. Itodo
(Director, Production)



Dr P. A. Okewole
(Director, Diagnostic & Extension)



Mrs. E. P. Wapmuk
(Director, Admin & Supply)



Dr M. S. Ahmed
Executive Director/CEO



Dr R. A. Ocholi
(Director, Quality Assurance)



Mr. Moses Fabunmi
Internal Auditor



Mr. Anebi Idoko
(Director, Finance & Accounts)

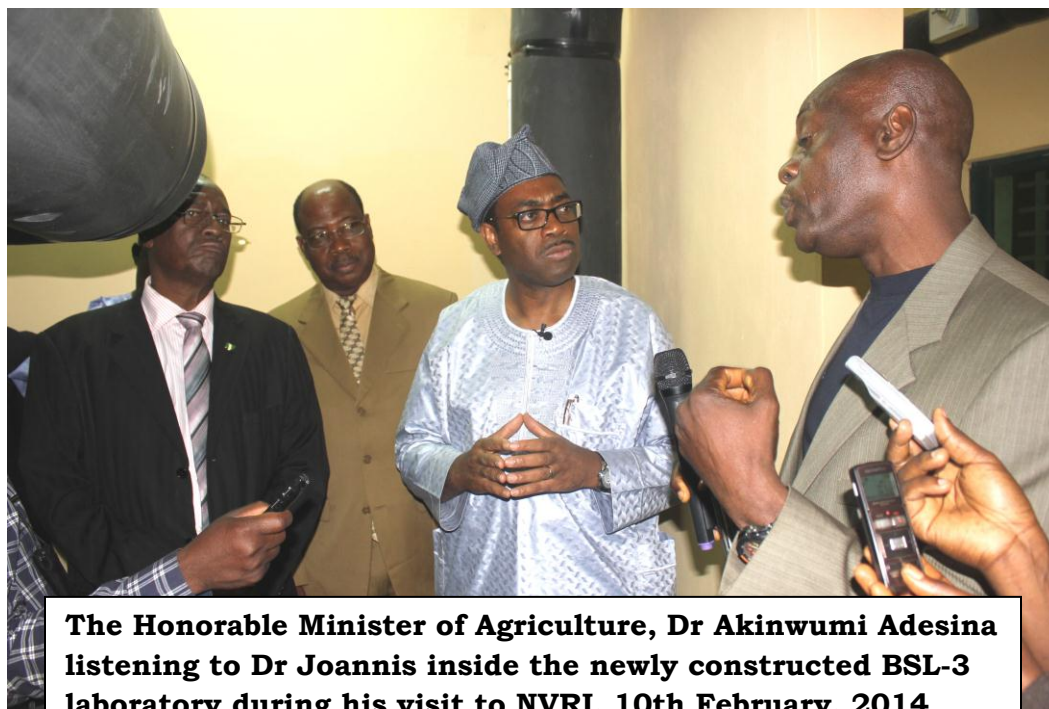


Chief B. Echeonwu
(Ag Provost, FCVMLT)



Prof HM Sharubutu
(Provost, FCAHPT)

MAJOR ACTIVITIES IN THE INSTITUTE IN PICTURES



The Honorable Minister of Agriculture, Dr Akinwumi Adesina listening to Dr Joannis inside the newly constructed BSL-3 laboratory during his visit to NVRI, 10th February, 2014



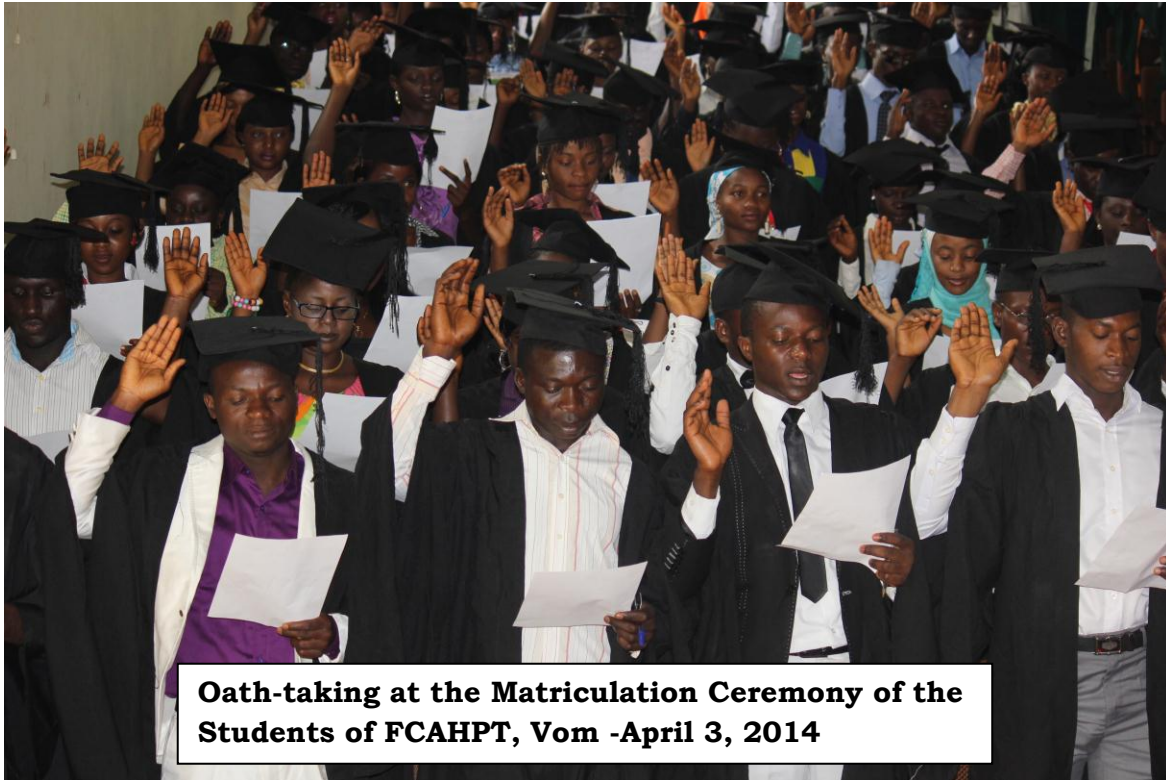
NIPSS Participants', SEC 36, at their Annual Visit to NVRI, Vom - Feb 14, 2014



Workshop on Pre-Retirement for Staff of NVRI - February 27 and 28, 2014



Condolence visit by Executive Director (standing) and Management of NVRI, Vom to the family of late Dagwom Rwei Vwang - March 14, 2014



Oath-taking at the Matriculation Ceremony of the Students of FCAHPT, Vom -April 3, 2014



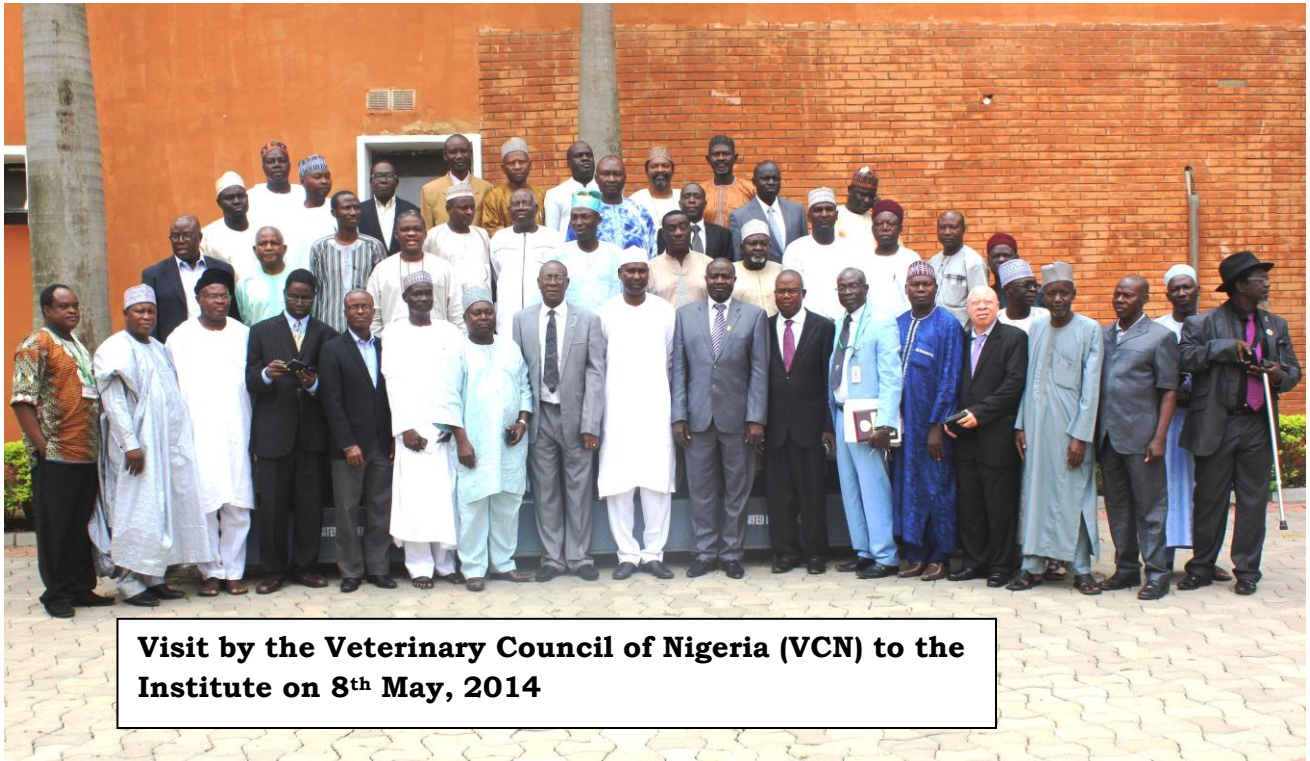
Executive Director NVRI Vom, Dr. M. S. Ahmed at his Investiture as Road Marshal - April 4, 2014



The Commander of the JTF Special Task Force (Major Gen DD Enetie) paid a familiarization visit to the EDVR and the Institute on 9th April, 2014



Presentation of Certificate of Commendation to EDVR, Dr MS Ahmed by Conference of Civil Society Organization for Peace and Development - May 2, 2014



Visit by the Veterinary Council of Nigeria (VCN) to the Institute on 8th May, 2014



African Education Initiative, NEF/NVRI Toxicology Internship Programme - Opening ceremony - May 2014



Visit of Medical Lab MBTE to NVRI, Vom – June 16, 2014



Visit to the National Veterinary Research Institute, Vom by the Comptroller of Prisons (Martins Apebende) Plateau State Command – July 15, 2014



Moses Gilead Mabel Mercy Tetteh Chinyere

2014 NEF/ NVRI Toxicology Interns pose with the Executive Director, Dr MS Ahmed (arrow) at the Closing Ceremony, Aug 21, 2014



Rapt attention by the Executive Director (arrow) and Staff of the Institute during the Seminar on Ebola, presented by Dr Clement Meseke - Aug 26, 2014



The Commissioner of Police, Plateau State Command (Nasiru Oki) on a familiarization tour of NVRI Vom with the Executive Director – August 27, 2014



Livestock Vaccine and Vaccination Training of Locals by ICRC and NVRI, Oct 21, 2014



A Committee of the Veterinary Council of Nigeria, paid courtesy call to NVRI, Vom - November 3, 2014



Participants of OIE Twinning Pre-sampling Workshop CODA-CERVA at NVRI, Vom; 4th - 12th November 2014

RESEARCH REPORTS (HIGHLIGHTS/UPDATES)

Approval and commencement of FMD Twinning programme by OIE between National Veterinary Research Institute and the CODA-CERVA (Veterinary and Agrochemical Research Centre) Belgium took place

The Twinning Project seeks capacity building through addressing specific gaps in the knowledge on several aspects of FMD diagnosis and control in the Nigerian region to enable implementation of enhanced technical capability tailored to the needs of endemic settings.

The 3-year twinning project consists of 3 capacity building stages each aiming at a significant progress towards the objectives of the OIE's Twinning Programme. The final goal is (a) to transfer the FMD diagnostic technology and the knowledge on FMD biosecurity and quality control by organizing a technical laboratory workshop in Nigeria for this region of Africa (b) to consolidate the efforts in a sustainable support of the veterinary service for the control of FMD, and (c) to prepare the candidate laboratory to evolve towards the level of OIE Reference Laboratory.

The NVRI FMD section has also won a grant from the World Bank WAAPP-Nigeria to undertake the development of improved foot-and-mouth disease (FMD) virus vaccine in Nigeria using indigenous isolates. The FMD vaccine development is expected to be completed in 2 years period.

A safe, potent, and immunogenic vaccine for the prevention and control of Capripox has been developed by Viral Research Division. A virus (Trop. Vet. 24(4), 2006) isolated from Zebu cattle in Kano Nigeria, designated (ZC-KN) and specifically identified by phylogenetic analysis (Journal of General Virology 90, 1967-1977 2009) as Lumpy Skin Disease Virus (LSDV) was used. The working seed virus employed was at its 102nd passage level.

The developed Capripox vaccine has undergone laboratory and field trials and has been certified to be pure, safe, potent and immunogenic by tests carried out in Viral Research Division and the QC Division, here in NVRI Vom. It is currently undergoing tests for final certification at the African Union-Pan African Veterinary Vaccine Centre (AU-PANVAC) in Ethiopia.

An experimental conjunctival vaccination on *Brucella* research which started in 2013 was concluded in February 2014 at the Livestock Investigation Division (LID) farm NVRI; using twenty cattle (10 between 6-8 months and 10 above one year). The animals were given *Brucella* S-19 conjunctival vaccination.

Sero-monitoring of vaccinated animals was done after two week, at four weeks and subsequently monthly for a period of 6 months using Rose Bengal Plate Test. Result of experimental conjunctival vaccination at LID showed sero-conversion in 70 % of the animals two months post vaccination. Antibodies were subsequently cleared from three months upwards.

Evaluation of the efficacy of a new trypanocidal drug Ganasegur® in the treatment of field and experimental Trypanosomiasis in cattle and mice in Nigeria was carried out by Parasitology Division.

The Division conducted both field and laboratory trial to evaluate the efficacy of the new trypanocidal drug Ganasegur® imported to Nigeria for the treatment of hemoprotozoan (Trypanosoma and Babesia spp.) infections in cattle. Field trial was conducted on 4 cattle naturally infected with *T. vivax*. Comparative analysis of the new drug with an existing drug Diminazene aceturate in treating natural infection in cattle shows promising result for the new drug, clearing trypanosome species from blood within 48 hours post administration with marked improvement of pack cell volume (PCV) of treated animals after 7 days.

List of Research Projects with Collaboration from Local and International Funding Agencies (on-going in 2014)

1. Development of improved foot-and-mouth disease (FMD) virus vaccine in Nigeria using indigenous isolates. Funding by WAAP-NIGERIA.
Principal Investigator: Dr. H.G. Ularamu
2. Coordinated Research Project “D32031”, entitled “Early and Rapid Diagnosis and Control of TADs - second phase - African Swine Fever (ASF)”. Funding by FAO/IAEA Joint Division.
Chief Scientific Investigator: Dr Luka, Pam.

**List of Approved ARCN Sponsored Competitive Research Grant Scheme
Projects for NVRI Vom (on-going in 2014)**

1. Project (RFA 2 No. 11) Title: “Development of pelleted thermostable NDV-I₂ clone vaccine for the control of Newcastle disease in rural poultry using local foodstuff as carrier”.
Principal Investigator: Dr. J. O. Ibu.
2. Project (RFA 2 No. 23) Title: “Isolation and characterization of Foot and Mouth Disease (FMD) virus isolates in Nigeria for improved vaccine development”
Principal Investigator: Dr. H.G. Ularamu
3. Project (RFA 2 No. 24) Title: “Isolation and characterization of Salmonellae for the development of a disease surveillance and control programme in commercial poultry”.
Principal Investigator: Dr. Maryam Muhammad
4. Project (RFA 2 No. 39) Title: “Development of a novel molecular vaccine for the control of contagious bovine pleuropneumonia (CBPP) in Nigeria”.
Principal Investigator: Dr. Yewande Akalusi.
5. Project (RFA 2 No. 44) Title: “Evaluation of immunogenicity of haemagglutinin genes of H5N1 sublineages of Avian influenza virus in Nigeria”
Principal Investigator: Yakubu Bitrus.
6. Project (RFA 2 No. 47) Title: “Production and standardization of *Brucella* antigen for the diagnosis of brucellosis”
Principal Investigator: Dr. R. A. Ocholi.
7. Project (RFA 2 No. 48) Title: “Isolation and molecular characterization of Peste des petits ruminants (PPR) in sheep, goats and camels and the adoption of a thermostable PPR vaccine in Nigeria”.
Principal Investigator: Dr. Woma T. Yusufu.

**List of 2014 Capital Projects for National Veterinary Research Institute,
Vom**

1. Animal Containment Facility (BSL 3)
2. Special Research Programme: Multivalent Vaccine Research and Development, Clostridial Vaccine; BQ+Hantavac+HSV; Gumboro+NDVL; Fowl Typhoid; Fowl Cholera and Newcastle (Lasota)
3. Specialized input for Vaccine Research Development and Production
4. Development of an Independent Bacterial Vaccine Production, Laboratory (BVPL) for CGMP Compliance towards establishing a Vaccine Company
5. Special Research Programme: Development of Killed Adjuvanted Rabies Cell Culture Vaccine for Dogs, Cats and Human
6. Specialized Fittings for the New Bacterial Vaccine Production Laboratory (BVPL)
7. Development of Effective Diagnostic and Control Measures for Bovine Tuberculosis
8. Special Research Programme: Integrated Livestock Health and Peri-Urban Dairy Project
9. Special Research Programme: Isolation, Serological and Molecular Characterization of Highly Pathogenic Avian Influenza (HPAI) Virus of Poultry in Nigeria
10. Special Research Programme: Diagnostic Survey of Livestock and Zoonotic Diseases (Animal Disease Surveillance and Disease Pattern in Nigeria) of Economic Importance
11. Perimeter Fencing

REPORTS FROM DIVISIONS

ADMINISTRATION

The Department is charged with the responsibility of assisting the Management in the day-to-day running of the Institute. This includes matters relating to Administration and Establishment. The Department also handles the processing of Retirement, Training and Welfare of Staff of the Institute. The Administration Department has three (3) Divisions viz:

- i. Administration
- ii. Stores; and
- iii. Workshop

Under the Administration Division, the following Units exist:

Establishment Section

In the period under review (2014), the Establishment Unit of the Division handled the following:

1. Promotions:

Senior Staff	-	68
Junior Staff	-	32
2. Advancement/Conversion:

Senior Staff	-	7
Junior Staff	-	12
3. Disciplinary Cases:

Senior Staff	-	1
Junior Staff	-	Nil

Records Unit

During the period under review (2014), the Records Unit recorded the following:

a. Resignation	-	1
b. Retirement	-	16
c. Deaths	-	7
d. Dismissal	-	Nil
e. Termination	-	Nil
f. Withdrawal	-	1
g. Transfer of Service	-	3
h. Appointment	-	4

The Staff Nominal Roll as at December, 2014 is Nine Hundred and Eighty Five (985).

SIWES Unit

The Unit through the year 2014 continued with routine exercise of accepting Students from various Institutions on Industrial attachment. Acceptance of Students is done based on Geo-political Zones where the Students are located and in accordance with the Federal Character Principle. Universities, Federal and State Polytechnics, Colleges of Education are all accommodated within various Divisions in NVRI. Total number of Students accepted and trained in the Institute in 2014 is 180.

Pension Unit

Major Highlights of 2014 Include:

Prompt Payment of Monthly Pension

Implementation of 33% Pension increments for Pensioners on the Old Pension Scheme and payment of ten months 33% increment arrears. Five cases of death were reported in respect of the Group Life Assurance benefits.

A workshop for prospective retirees of the Institute due to retire from 2014 to 2018 was organized by Fesido Ventures Limited.

Submission of data on all Pensioners was made to the (PTAD) Pension Transitional Arrangement Department which would soon centralize Pension payments for Pensioners on the Old Pension Scheme nationwide

Report on Educational Visit from January – December, 2014

In accordance with the National Veterinary Research Institute's Mandate which is "To train intermediate manpower in Veterinary Medical Laboratory Technology". The following are the numbers of Schools that visited the Institute within the period under review:

a. Universities	-	10
b. Colleges of Education	-	14

- | | | |
|----------------------|---|----|
| c. Polytechnics | - | 8 |
| d. Corporate Bodies | - | 9 |
| e. Secondary Schools | - | 98 |

NYSC Scheme

A total number of 30 Corp Members were accepted within the year 2014. The Institute has 15 Corpers left, due to finish in July, 2015.

Legal Unit

The Unit serves as adviser to the Institute on legal matters. It handles both criminal and civil cases of the Institute in liaison with the External Solicitors and Advocates on retainership with the Federal Ministry of Agriculture and Rural Development and the National Veterinary Research Institute, Vom. About eight (8) cases were handled by the Legal Unit in the year 2014 which are at various stages of hearing at the Kaduna State High Court, National Industrial Court, Jos Division and Notice of Appeal which is filed at the Supreme Court.

a. Institute's Quarantine/Triangular Land

On the issue of the Institute's quarantine land commonly referred to as the Triangular Land, the Plateau State Ministry of Agriculture had indicated interest in the same land to set up ASTC Headquarters in 2013. The Institute Management Committee took a decision on the issue by conceding to their request but also requested that an alternative land be provided for its Staff Housing Scheme by the Plateau State Government. The Institute is yet to receive response to that effect.

Training Unit

In 2014 the Training Unit and Committee on Training recorded the training of the following number of Staff:

1. Seven (7) Veterinary Research Officers
2. Five (5) Medical Laboratory Scientists
3. Two (2) Medical Laboratory Technicians
4. Ten (10) other staff (OND, HND) of different Cadres.

Twelve (12) Staff of the Institute completed their in-service training in 2014.

Security Unit

The Unit has two (2) Private security outfits. These are the Executive Guards and Pahek Security Services Limited.

Apart from the Private Security Personnel, there is the Mopol/Conventional Police attached to the Institute and there have been corresponding synergy which ensured safety of lives and property within the Institute

a. Security of Dignitaries on Visit to NVRI in 2014

In the year 2014, the Institute witnessed influx of high profile personalities both national and international. This Unit provided adequate security to all the VIPs such as Senate and House of Representative Committees on Agriculture during their oversight functions. NIPSS Participants on familiarization visits to NVRI, Governing Board and Expatriate Partners on Research collaboration. The Unit also monitored and provided security during activities such as the Institute's routine/special seminars, workshops and other social activities.

b. Monitoring of Students' activities

All social activities of students of the two Federal Colleges, FCAH&PT and FCVMLT, Vom were closely monitored and covered by the Unit to prevent all forms of hooliganism. Nevertheless, there was protest by the students of FCVMLT over alleged increase in Fees.

Generally, the Institute witnessed peace in 2014 even though there were series of reported cases of vandalization of electric copper wires within the Institute during the year under review. The Unit has put in place mechanism to forestall the ugly incident and expose whoever is involved.

APPLIED BIOTECHNOLOGY

In the year under review the routine activities carried out by Applied Biotechnology is as presented in table 1 below:

Table 1: Molecular Diagnosis/Routine Research Activities

NUMBER OF SAMPLES													
Organism	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Se p	Oct	Nov	Dec	Total
Rabies					13		4	39					56
E. coli				20									20
Salmonella				20	5					33	25		83
ASF	44				1			10					55
Water					10								10
Leptospira					35				8				43
IBDV							3						3
Capripox						2			3				5
PPR	5			36		8		154					203
Mycoplasma	56								50				106
Trypanosome		12			7		10	2					31
CIA										123			123
Campylobacter	10						87	15	15	40	68		235
TTV	28												28
Lactic Acid Bacteria			6	28									34
P. mucuna seed				1									1

Acha Seeds						21							21
Mareks							250						250
Mushroom								10					10
Total	143	12	6	105	71	31	350	191	76	163	93		1241

Constraints

In view of increasing demand for molecular biology based analyses, the Division is in need of 2 more PCR machines (GeneAmp PCR System 9700), one (1) Real-Time PCR Machine, two sets of agarose gel electrophoresis apparatus (Bio-Rad) to enhance the output of the Division

BACTERIAL RESEARCH

Some of the notable activities carried out in the year 2014 are as enumerated below:

Brucella

Routine serological diagnosis was carried out by RBPT on 545 serum samples consisting of 36 from cattle, 450 from swine, 24 from canine, 2 from equine, 15 from ovine and 18 from caprine. Twenty seven (27) samples were also cultured for *Brucella* consisting of seven (7) vaginal swabs, three (3) fetuses, two (2) placentas, two (2) hygroma fluids and one (1) stomach. Others were two (2) hearts, three (3) lungs, three (3) spleens, one (1) kidney and three (3) liver samples. Four (4) bovine sera were positive for *Brucella* antibodies from the routine samples processed but no *Brucella* isolates were obtained from the tissue samples processed

Mycoplasma

Nine hundred and eighty nine (989) samples were analyzed; comprising 641 bovine, 72 caprine and 276 avian samples. Eighty nine samples were positive for CBPP and 36 avian samples were positive for *Mycoplasma gallisepticum*

Salmonella

Two hundred and ninety eight (298) suspected *Salmonella* isolates from the *Salmonella* Research Unit were sent to Italy for serotyping. Out these, 247 of the isolates were confirmed to be *Salmonella*. From samples received in the laboratory for routine diagnosis especially from Central Diagnostic laboratory of the Institute, 61 out of 73 samples were analysed and diagnosed as *Salmonella*, 8 out of 14 samples for *E. coli* and 15 out of 19 samples for other bacterial organisms.

BACTERIAL VACCINE PRODUCTION

Mandate of the Division

To develop and produce animal vaccines (bacterial vaccines), sera and biological to meet national and regional demands

Achievements

The Table below gives the total doses of bacterial vaccines produced in the year 2014.

Table 2: Bacterial Vaccine 2014 Production Figures in Doses

Month	ASV	BV	BGV	CBPP	FCV	FTV	HSV	H/V	TOTAL
Jan						1280100			1280100
Feb				1589200	336000		81480	34480	2041160
Mar	359600		772500	801400	322800	397800		65800	2719900
Apr	353200			1615000	171000	30200	22840		2192240
May	365600	394700			308800	1398500	73000		2540600
Jun	363200		397000		227600	873400	60640	30560	1952400
Jul			391000		79000		28040		498040
Aug	357600		786500		156000		16880	33720	1350700
Sep									
Oct	389600					239100			628700
Nov				738600	241200		17040		996840
Dec						552500			552500
TOTAL	1799200	394700	2347000	19047000	1842400	4771600	299920	164560	30,666,380

Total doses produced January – December, 2014: 30,666,380

Keys:

ASV: Anthrax Spore Vaccine;
BV: Brucella Vaccine;
BQV: Black Quarter Vaccine;
CBPP: Contagious Bovine Pleuro-Pneumonia;
FCV: Fowl Cholera Vaccine;
FTV: Fowl Typhoid Vaccine;
HSV: Haemorrhagic Septicaemia Vaccine;
HV: Hantavac Vaccine.

Challenges

Challenges that faced the Division and hampered vaccine production in the year 2014 include; trade disputes and industrial actions, frequent break down of vital equipment and shortage of 200 ml capacity bottles for packaging the wet vaccines.

BIOCHEMISTRY

In the year under review, routine activities carried out in the Division are as highlighted below.

A total of 591 commercial samples were analysed. Out of this number, 351 samples were analysed for proximate, and 100 for anti-nutritional, phytochemicals, toxic substances and mineral elements. The remaining 140 samples were for body fluids.

A total of 1,021 research samples were also analysed. The bulk of the samples; 820 were water samples from the Institute's reservoir, 60 were for Toxicology Internship Program (TIP), 20 for toxicological research, 30 were drug development targeted samples and ninety one (91) for animal nutrition research. The nutrition related research samples were mainly from Poultry, LID, Dagwom Farm and the Division itself.

Challenges

Part of the major challenges that faced the Division in 2014 was the lack of function of the Atomic Absorption Spectrophotometer (AAS) which hampered routine and research activities of the Division. The Division is also in dare need of more research officers and technical staff

CONSULTANCY

The Consultancy Unit of the Institute is set up to provide services and generate income. The service windows include laundry services, ambulatory services, chair rentals, bus service and waste disposal. Others are training, sale of Ethno-veterinary products and sale of beef, goat and chicken meat.

In the year under review, there was installation of two water tanks and a pumping machine for constant supply of water to the laundry for effective service delivery.

The renting of canopies and chairs dropped and became irregular in 2014 because the chairs and canopies are in bad condition.

With the introduction of IPPIS in the Institute, the payment for waste disposal by staff living in NVRI quarters became poor because of none deduction from salary source and none commitment by staff to pay up. Almost 90% of what is generated from this service goes to the Contractor who owns the refuse disposal vehicle.

Meat Sales Unit was introduced in June 2014. The Unit provides wholesome beef, goat and chicken meat to the general public at affordable prices.

Challenges

The major challenge facing the Consultancy Unit is the lack of funds which hamper the carrying out of its routine and planned activities. The insecurity in the country has made ambulatory service almost impossible. The old canopies and chairs do not attract good patronage

Future Plan

The Unit hopes that better funding will be provided in 2014 for immediate and long term plans of the Unit in 2015.

DAGWOM FARM

Introduction:

Dagwom farm has four sections, namely; Feed mill, Rabbitry, Fabrication and Stores. In 2014 the Division carried out activities such as, Production of standard quality feed for vaccine production and research animals, production of laboratory animals (rabbits) for research and vaccine testing and extension to interested organizations, Institutions and individuals.

The Division also carried out cross-breeding of rabbits for improved adaptability, feed conversion and carcass yield. Kerosene powered incubators with high efficiency were also produced for extension to backyard farmers during the period under review.

Some of achievements made by the Division in 2014 are as shown in the tables on production and sales below:

Table 3: Feed production by Dagwom Farm in 2014

	Product Type	Actual Products (Tons/Litres)	Price Per Tons/Litres (₦)	Amount (₦)
A.	Feeds			
1.	Breeders mash	106.475	125,230.000	13,333,864.250
2.	Layers mash	276.025	122,000.000	33,675,050.000
3.	Breeders pellets	0.610	188,758.000	115,142.380
4.	Growers mash	72.785	118,010.000	8,589,357.850
5.	Growers pellets	32.794	130,000.000	4,263,220.000
6.	Weaners pellets	0.080	131,131.120	10,490.489
	Chick mash	104.435	135,010.000	14,099,769.350
	Quail chick mash	0.070 -	- -	12,801.800 -
	Quail layer mash	0.180	-	57,337.300
	Broiler Starter	0.660	-	85,145.290
	Broiler Finisher			
	Total	594.114		74,242,178.709
B.	Vegetable oil			
1.		10,741.00	115.00	1,150,000.00

Table 4: Soya oil (By-Product) Produced in 2014

Quarter	Soya-oil produced (litres)	Soya-oil sold (litres)	Amount (₦)
Jan –Mar	3,534.0	2,800	322,000.00
Apr – June	2,846.00	2,800	322,000.00
July – Sept	2,745.0	3,200	368,000.00
Oct – Dec	1,616.0	1200	138,000.00
TOTAL	10,741	10,000	1,150,000.00

Table 5: Rabbits Produced/Sales in Dagwom Farm in 2014

S/N	Categories of rabbits	Actual Stock	Closing Stock	Number of animals sold	Amount (₦) generated
1	Does	93	124	47	47,000.00
2	Bucks	22	23	72	72,000.00
3	Growers	50	99	144	115,200.00
4	Weaners	139	102	846	423,000.00
5	TOTAL	309	348	1109	657,200.00

Table 6: Kerosene Incubators Produced/Sales in 2014

Quarter	Stock Balance B/F 2013	Number Constructed	Target	Number Sold	Amount (₦)
1 ST	4	15	33	2	90,000.00
2 ND	-	5	33	6	270,000.00
3 RD	-	Nil	33	7	315,000.00
4 TH	-	Nil	33	7	315,000.00
Total	2	20	132	22	₦990,000.00

Table 7: Materials Issued from Stores Section of Dagwom Farm/LID in 2014

S/No	Items	B/F Dec. 2013(Kg)	Qty Receipts (Kg)	Total Balance (Kg)	Qty Issued (Kg)	Unit Price (₦)	Amount (₦)	Stock Balance (Kg)
1	Maize	5,643.9	390,000	395,643.9	359,337.95	110	39,527,120.6	36,305.95
2	Soya beans	26,609	150,000	176,609	151,264	160	24,202,240	25,345
3	Wheat offal	54,850	97,500	152,350	133,950	80	10,716,000	18,400
4	Limes stone	12,687.75	30,000	42,687.75	27,487.8	45	1,236,951	15,199.95
5	Bone meal	14,410.39	30,000	44,410.39	28,694.64	85	2,439,044.4	17,715.75
6	Methionine	50.0	725.0	775.0	652.875	2,250	1,468,968.75	122.125
7	Lysine	NIL	683	683.0	574.83	1,800	1,034,649	108.17
8	Common salt	872.5	5,495	6,367.5	2,679.625	66	176,855.25	3,687.875
9	Fish meal	100	975.0	1,075	608.7	1,150	700,005	466.3
10	Toxynil	NIL	-	-	-	-	-	-
11	Mycotoxin binder	200	306	506	306.9	1,575	483,367.5	199.1
12	Nutrizyme	-	240.0	240	183.19	1,237	227,496.67	56.81
13	Chick Premix	75.0	325	400	276.25	1,250	345,312.5	123.75
14	Grower Premix	2.5	295	297.5	262.5	950	249,375	35.0
15	Layer Premix	7.5	660	667.5	660.625	980	647,412.5	6.875
16	Breeder Premix	72.5	284	356.5	269.625	1,150	301,068.75	86.875
17	Empty bags	10,106(pcs)	25,000(pcs)	35,106	23,270	62	1,442,740	11,836(pcs)
18	Broiler Starter	NIL	-	-	-	-	-	-
19	Broiler finisher	7.5	50.0	57.5	7.5	800	6,000	50.0
	TOTAL						₦85,213,651.92	

Challenges/Constraints

The challenges that affected the Division in 2014 include; Inadequate water supply with negative effect on rabbit nutrition and sanitation, lack of a weigh bridge and lack of constant power supply. Others are Delay in fund release for the purchase of incubator materials and the undue delay in the release of products to farmers

Future Plan

Hopefully in 2015, it should be possible to actualize the purchase of Guillotine, folding, rolling and wood work multi-purpose machines for efficiency and high product products. The renovation of the old grain silo and the stores to improve the grains' storage conditions and the feed mill will also be renovated. Inclusive in the plan for 2015 is the connection of Dagwom farm to the Institute's main water works for adequate water supply

DERMATOPHILOSIS

The major focus of the Division within the Institute's mandate includes; research on dermatophilosis of livestock, research on mycotic organisms of livestock especially those associated with *Dermatophilus congolensis* infection and the research and production of ethno-veterinary products for the treatment of skin conditions in animals and humans.

Bacteriology

In the year under review, 57 cattle, 15 goat and 5 sheep skin scab samples were collected and processed for bacteriology. All the samples were positive for *Dermatophilus congolensis* on direct examination, while 7(12.3%) and 2 (46.7%) *Dermatophilus congolensis* was isolated and preserved from cattle and goats respectively.

Mycology:

Six hundred and fifty six (656) human skin scrapings and 26 animal (23 avian, 1 caprine and 2 feed) samples were collected and processed for mycology. Fungi were isolated from 634 (96.6%) of the samples. The fungi isolated and identified were as follows: *Trichophyton mentagrophytes*, *Trichophyton tonsurans*, *Trichophyton species*, *Aspergillus niger*, *Aspergillus niger* + *Mucor species*, *Aspergillus flavus*, *Aspergillus fumigates* and *Aspergillus species*. Others are *Mucor species*, *Sporothrix schekii*, *Penicillium species*, *Fusarium species*, *Cladosporium species*, *Candida species*, *Ulocladium species*, *Exophiala species*, *Rhizopus species*, *Biplaris species*, and *Curvularia species*

The under listed fungi were isolated from the respective animal species and feeds. Avian species; *Aspergillus flavus*, *A. niger*, *Sporothrix shenkii* and *Acremonium sp.* From caprine species, *Fusarium species* was isolated. Feed produced *Aspergillus sp* and *Acremonium sp* while 15 strains of dermatophytes isolated have been preserved.

Ethno-veterinary products:

The under listed ethnoveterinary products were produced within the period in view

Lamstreptocide A&B

412 Liters

Dermatocide 3M soap	1884 Tablets
Dermatocide 3M ointment (120 grams)	144 Units
Dermatocide 3M ointment (40 grams)	134 Units

Challenges

The protein profiles of *D. congolensis* isolates, a very critical part in dermatophilosis research could not be carried out because of lack of the appropriate reagents. Also, there was poor yield of dermatophyte isolates resulting from lack of inclusion of selective components (cyclohexamide + chloramphenicol) during preparation of mycological media. The factory could not operate at full capacity due to inadequate supply of raw materials.

Future Plan

1. To characterize and preserve all *D. congolensis* and significant fungi especially dermatophytes
2. To determine the protein profiles of all *D. congolensis* isolates and carry out molecular characterization of both *D. congolensis* and fungi isolates
3. To increase production of ethno veterinary products to meet the demand

DIAGNOSTIC

Introduction

The Diagnostic division has the following sections, namely: Necropsy, Epidemiology, Bacteriology, Histopathology, Clinical pathology, Laboratory Animal Section and Large Animal Experiment Station. There are also functional units such as Rabies, Serology (viral diagnostic), Laundry and Wash-up. The Division therefore carries out Veterinary clinical outreaches (ambulatory services) to farms, diagnosis of emerging and re-emerging diseases and surveillance activities within the nation.

Report of Activities in 2014

Necropsy

The necropsy section received and processed 651 cases, comprising 316 Avian, 21 Bovine, 212 Canine, 21 Caprine and two (2) Equine. Others are three (3) Feline, 27 Laprine, 13 Ovine, six (6) Porcine, and 13 wild life cases. For Avian species, mostly diagnosed diseases include; colisepticaemia, colibacillosis, fowl typhoid, fowl cholera, Gumboro, lousiness, helminthosis, salpingitis, coccidiosis, Aspergillosis, Newcastle disease, egg yolk peritonitis, Marek's and other Bacterial septicaemias); Bovine (trypanosomosis and ruminal impaction), Canine (Rabies, leptospirosis, Parvoviral enteritis); Caprine(Bacteria septiceamias); Laprine (Coccidiosis, Collibacillosis, and fungal infection); Ovine (Bacterial septicaemia, and pneumonia).

Histopathology Section

The Histopathology section received and processed a total of 1,546 tissues from 357 cases involving Avian, Bovine, Canine, Laprine, Equine, Ovine, murine, Porcine and Wildlife (primate, Ostrich, python) species, from the necropsy section.

Bacteriology Section

The bacteriology section processed a total of 1,043 specimens from 398 cases. Five hundred and seventeen (517) isolates were recovered, out of which 511(98.8%) were bacteria, and 6 (1.2%) fungi.

Clinical Pathology Section

A total of 485 specimens were received out of which 29 specimens (5.9%) were unsuitable. Haematological analysis was carried out on 383 specimens while the remaining 73 specimens were for biochemical analysis. The specimens were from various animal species including reptiles.

Epidemiology Section

The epidemiology section was engaged in developing databases for collating diagnostic reports from cases submitted daily to the laboratory. Laboratory confirmed disease information was compiled on monthly basis. Quarterly and annual reports were also prepared by this section.

Rabies Section

The section received and processed a total of 222 specimens from seven (7) different species in the course of the year for rabies diagnosis. Out of these, 212 (95.4%) were from domestic dogs, 1 (0.5%) from cattle, 2 (0.9%) from sheep, 1 (0.5%) from goat, 2 (0.9) from cats, 2 (0.9) from horses and 2 (0.9) from wildlife. Of all the submissions, 220 were suspected rabies cases, while the remaining 2 submissions were from necropsy samples for routine check. A total of 111 (50%) of the submissions were confirmed positive for rabies and they were all from domestic dogs.

In the year under review, also, the rabies team of the Institute participated in the annual FAT and RT-PCR proficiency tests conducted by the lyssavirus unit of Nancy laboratory, France for rabies and wildlife, an EU reference laboratory for rabies. The Group performed excellently in the proficiency tests of 2014

The rabies Unit hopes to replace the mouse inoculation test with rabies tissue culture isolation test (RTCIT) for isolation of rabies and related viruses and to embark on monoclonal antibody typing technique for serotyping rabies and related virus isolates.

Small and Large Animal Experiment Stations

The Large Animal Experimental Station was used by the Institute Research Officers for various research activities in the course of the year. Some of the research activities that took place in LAES in 2014 include:

- 1) Development of capripox vaccine
- 2) Characterization of Newcastle disease virus isolates using intravenous pathogenicity index
- 3) Antibiotic therapy for Contagious Bovine Pleuropneumonia in Nigeria

- 4) Determination of duration of immunity in goats vaccinated with PPR Homologous vaccine
- 5) Acute, subacute studies of *Eucumis metuliferus*
- 6) Validation of vaccine seed and
- 7) Determination of sex of day old chicks using egg shape and odour

Serology Unit

The unit received and processed a total of 210 sera samples for the presence of antibodies against Newcastle disease and Infectious bursa disease in birds. All the tested sera samples were negative both for Newcastle and Infectious bursa diseases. The samples were from Plateau, Kano and the FCT.

Small Animal Section

The Laboratory Animal Unit (i.e. Small Animal Section) produced 3,608 mice, 241 Albino rats and 21 rabbits in the course of the year. These animals were distributed, on request for research, diagnosis and vaccine testing to Central Diagnostic Laboratory (2582 mice), viral vaccine production division (130 mice), parasitology (20 mice and 20 rats), viral research (209 mice) and NEF program (111 rats). Apart from the above; 667 mice, 110 rats and 21 rabbits were sold to organizations and individuals for research activities.

Challenges

The breakdown of some equipment in different laboratories of the division slowed down the pace of diagnostic work in 2014. Lack of adequate staff, particularly Veterinarians trained in various aspects of pathology (i.e. Toxicological pathology, fish pathology, wildlife pathology and forensic pathology) was a serious challenge.

Future Plan

The Division will be most grateful if more veterinarians are engaged in 2015 and trained in the different field of pathology enumerated above.

Table 8: Submissions Received From Various States of the Country in 2014**FINANCE AND ACCOUNTS**

State	SPECIES												Total
	Avian	Bovine	Canine	Caprine	Equine	Feline	Laprine	Ovine	Water /Feed	Porcine	Wild life	Biological	
Abia	-	-	1	-	-	-	-	-	-	-	-	-	1
Adamawa	1	1	-	-	-	-	1	-	-	-	-	-	3
Akwa Ibom	1	-	-	1	-	-	-	-	-	-	-	-	2
Anambra	-	-	-	-	-	-	-	-	-	-	-	-	0
Bauchi	11	2	8	-	1	-	-	-	-	-	1	-	23
Bayelsa	-	-	-	-	-	-	-	-	-	-	-	-	0
Benue	2	-	1	-	-	-	-	-	-	-	-	-	3
Borno	-	-	-	-	-	-	-	-	-	-	-	-	0
Cross River	-	-	2	1	-	-	-	-	-	-	-	-	0
Delta	-	-	-	-	-	-	-	-	-	-	-	-	0
Ebonyi	-	-	-	-	-	-	-	-	-	-	-	-	0
Edo	-	-	-	-	-	-	-	-	-	-	-	-	0
Ekiti	-	-	-	-	-	-	-	-	-	-	-	-	0
Enugu	-	-	-	-	-	-	1	-	-	-	-	-	1
FCT	7	1	-	1	-	-	-	2	1	-	1	-	13
Gombe	-	-	1	-	-	-	-	-	-	-	-	-	1
Imo	-	-	-	-	-	-	-	-	-	-	-	-	0
Jigawa	-	-	-	-	-	-	-	-	-	-	-	-	0
Kaduna	-	-	7	-	-	-	-	-	-	-	-	-	7
Kano	3	1	-	2	-	-	-	-	-	-	-	-	6
Katsina	1	1	1	-	-	-	1	-	-	-	-	-	4
Kebbi	-	-	-	-	-	-	-	-	-	-	-	-	0
Kogi	2	-	-	-	-	-	-	-	-	-	-	-	2
Kwara	1	-	-	-	-	-	-	-	-	-	-	-	1
Lagos	-	-	2	-	-	-	-	-	-	-	-	-	2
Nasarawa	14	1	1	1	-	-	-	-	2	-	-	-	19
Niger	6	-	-	-	-	-	-	1	-	-	-	-	7
Ogun	-	-	-	-	-	-	-	-	-	-	-	-	0
Ondo	-	-	-	-	-	-	-	-	-	-	-	-	0
Osun	5	-	-	-	-	-	-	-	-	-	-	-	5
Oyo	-	-	1	-	-	-	1	-	-	1	-	-	3
Plateau*	262	14	187	15	1	3	23	10	7	5	11	7	545
Rivers	-	-	-	-	-	-	-	-	-	-	-	-	0
Sokoto	-	-	-	-	-	-	-	-	-	-	-	-	0
Taraba	-	-	-	-	-	-	-	-	-	-	-	-	0
Yobe	-	-	-	-	-	-	-	-	-	-	-	-	0
Zamfara	-	-	-	-	-	-	-	-	-	-	-	-	0
Total	316	21	212	21	2	3	27	13	10	6	13	7	869

Accomplishments in Year 2014

1. Budget:

The Division has consistently prepared and presented timely budget for the Institute and has always met the deadlines set for it.

a. In the year 2014 the following were the Institute's requirement:

i.	Capital	=	3,035,400,000.00
ii.	Other Charges	=	224,482,991.00
iii.	Personnel Emolument	=	1,981,501,958.23

b. The following amount was appropriated:

i.	Capital	=	457,593,762.00
ii.	Other Charges	=	178,626,539.00
iii.	Personnel Emolument	=	1,741,012,381.00

c. The amount Released is as follows:

i.	Capital	=	266,704,943.00
ii.	Other Charges	=	141,957,942.00
iii.	Personnel Emolument	=	1,741,012,381.00

d. Shortfall on Appropriation Releases

i.	Capital	=	190, 888,819.00
ii.	Other Charges	=	36,668,597.00

Table 9: Internally Generated Revenue of the Institute in 2014

<u>S/No</u>	<u>INCOME HEAD</u>	<u>AMOUNT (₦)</u>
1	Vaccine Production	169,511,862.50
2	Biochemistry	1,057,240.00
3	Bacteriology	32,200.00
4	Contract Reg./Tender	30,000.00
5	Cyber Café	94,210.00
6	Dagwom Farm / LID	2,516,636.00

7	Dermatophilosis	613,650.00
8	Diagnostic/ Lab Analysis	401,900.00
9	Guest House	6,646,840.00
10	Small Animal	86,200.00
11	LID	2,241,300.00
12	Virology	15,400.00
13	NEF	2,499,999.00
14	Poultry	8,597,300.00
15	Rent	2,404,041.95
16	Staff School	16,564,092.14
17	Other Incomes	<u>.196,400.00</u>
	Total Income	<u>213,509,271.59</u>

3. Integrated Payroll and Personnel Information System (IPPIS)

The Integrated Payroll and Personnel Information System(IPPIS)has been fully implemented. The staff of the Institute commenced receiving their salary through IPISS from the month of February, 2014 as reported last year.

4. Government Integrated Financial Management Information System (GIFMIS)

The Federal Government has commenced the payment of Overhead (Other charges) Expenses to various beneficiaries through Government Integrated Financial Management Information System (GIFMIS) since October, 2014. This platform utilizes the government Treasury Single Accounts (TSA) for all expenditure of the federal government.

The TSA ensures that all government expenditures are paid from one single account with the Central Bank of Nigeria.

It is expected that capital payment on this same platform will commence soon but without any specific date in view.

5 Constraints

i. Outstanding liabilities (unpaid vouchers)

During the year there were so many payment approvals that the fund available could not pay. Such vouchers are still pending as outstanding liabilities on the Institute.

ii. Lack of office space and furniture for few staff.

The shortage of office accommodation and furniture in accounts department has made staff to be sharing offices and table. Most of our offices are accommodating more number of staff than necessary.

INTERNAL AUDIT

Introduction

The formal instrument for the establishment of Internal Audit Units in Ministries/Extra-ministerial Departments is the financial regulations which states that “an Internal Audit Units is established to provide a complete and continuous audit of the Accounts and records of revenue and expenditure, plants, allocated stores and unallocated stores---”

Internal Audit is a managerial control which functions by measuring and evaluating the effectiveness of internal control system in an organization like NVRI.

Functions:

- (I) Checking compliance with laws, instructions and directive.
- (II) Checking economy, efficiency and effective use of resources.
- (III) Checking the adequacy of financial and accounting system.
- (IV) Checking the level of achievement of set objectives.
- (V) Checking the total operations of government for economy, efficiency and effectiveness.

Achievements:

1. We ensure that all total internally generated revenue are fully accounted for, by ensuring that all receipts are posted into the cash book serially and chronologically, and revenue collector’s cash books are examined monthly, ruled and balanced.
2. We ensure that only entitled and approved employees names appear on the payroll that emoluments computed accurately according to approved rates, on a consistent basis and that proper records are continuously maintained for staff emoluments.
3. We ensure that a general review of soundness, accuracy, and application of internal controls are in place at the organization, both financial and otherwise.
4. Verification of procurements was thoroughly carried out by the Audit Department to ensure that the items conform to the requirements on the contract agreements.
5. We carried out 100% checks on all vouchers sent to us by the Accounts Department.

Challenges

Proper training is needed for staff of the Audit department to acquaint them with the newly introduced Government Integrated Financial Management Information System (**GIFMIS**) for effective and efficient operation of the system in the organization.

Future Plan

- The Division hopes to add value to the organization by preparing and submitting comprehensive, detailed, meaningful and timely audit reports.
- All queries issued shall be pursued to logical conclusions based on the extant law and power guiding the duty of the Internal Auditor.
- Post Audit would be given a serious consideration, to enable review of all past records.
- NVRI Outstation Laboratories shall be visited next year for proper review of their books and records to ensure that the Institute does not suffer loses

LIBRARY AND DOCUMENTATION

The library is saddled with the repository responsibility of the intellectual output emanating from world of Veterinary Medicine, Animal Science and Allied fields of Science and Technology, from both the Institute Staff and other Organizations whose intellectual output are beneficial to the production of animals and their health. The library collects, organizes and disseminate such information to members of staff and other users whose information need has a direct link with the mandate of the institute. These materials are acquired in both hard copies and electronic format such as DVD, CDs, and the internet sources from AGORA, HINARI, OARE, and JSTOR.

The Institute library is divided into four (4) service points as shown below:

Circulation/Reference Section:

This section is saddled with the responsibilities of charging and discharging of books to library users. The section received and processed fourteen (14) books out of which, seven (7) were from International donors and 7 books from Australian Center for International Research (ACIAR) as gratis. The Section also received 21 Staff projects/theses and two (2) flex banners from research staff presentations.

One thousand four hundred (1400) clients used the library and about 60 publications were issued on loan from the reserved collection, and 31 from the open shelves. Inter library loan facilities were extended to clientele on referral visits

Technical Section

This Section applied Barcode Labels on 1,437 books in preparation for Online Public Access Catalogue (OPAC) and the process is on-going.

The Serial Section

No new Journals were received in 2014. However, the Section provided Journal retrieval services to users and about two hundred and fifteen (215) bibliographic queries were received and attended to.

E-Library Section

The NVRI core journal titles which are important for research, that were available on free access from the Global Online Research in Agriculture (AGORA) platform are no longer accessible and had made the e-library

patronage in 2014 very low. This was further complicated by the paucity of functional computers.

Challenges

1. Low patronage of the E-library due to incessant failure of the Institute Service Provider as well as availability of only few functional computers in the E-library, for internet browsing by Staff.
2. The single user license of Liberty 3 library Software makes the retrospective conversion of library resources very slow.
3. Journals titles of research interest to the Institute on free access on the AGORA platform is no longer available to Staff via the library due to the new policy by publishers who saw a potential for commercial success in Nigeria due to the Educational Trust Funding to University Libraries.

Future Plan

The Library hopes to implement full automation of library resources in the coming year

LIVESTOCK INVESTIGATION

Introduction

The vision of the Livestock Investigation Division (LID) is to be a model livestock farm using standard modern procedures with highly skilled and motivated staff to research into livestock health, and to produce in abundance; animals for research and vaccine production, Livestock breeds for improved meat and milk production, and quality livestock forage/feeds.

The population of animals in LID as at December, 2014 was; bovine (269), ovine (124), equine (15) and swine (9).

Animals at the LID farm are currently being managed under a semi intensive system, with a zero grazing period of 4 months (February-May) due to lack of pasture during the dry season while grazing of the animals commences during the rains (May-December).

Livestock health on the farm involves a planned annual herd management which includes the following;

- Routine vaccination of animals against CBPP, HS, BQ and PPR.
- Strategic worm and ectoparasite control.
- Diseases monitoring.
- Reproductive assessment.

Farm Activities in 2014

- Maintenance, repairs and servicing of all farm tractors and implements.
- Preparation and cultivation of land to produce silage and hay for livestock consumption.
- Steady and uniform supply of forages for livestock animals on the farm.
- Determination of the nutrients requirement of the animals with production of concentrate feed for the various species.
- Mowing of grass in the Institute, poultry farm, and pasture paddocks.
- Management of exotic Friesian bulls and Friesian/Bunaji bull crosses.
- Semen collection, processing and preservation for cattle insemination.
- Milk production and transfer of unproductive animals to other sections.
- Synchronization of oestrus and artificial insemination of cattle in the farm.
- Routine spraying and dipping of all animals in the farm using acaricides to prevent ticks infestation and tick-borne diseases.
- Strategic deworming and vaccination of animals at different periods of the year.

- Routine screening and sample collection to evaluate the health status of the animals.
- Provision of vaccine bulls for bacterial vaccine production.

ACHIEVEMENT

- Fortification of paddocks to reduce the incidence of breaking out of animals leading to the vandalization of private crop farms.
- Successful artificial insemination of 11 cows using frozen and chilled semen from Friesian bulls.
- Seven hundred and twenty five (725) metric tons of silage was produced on 225.654 sq. m area of land.
- Production of 10,000.00 bales of hay

CHALLENGES

- Presence of privately owned animals in the farm. Over the last 4 years, the Institute has consistently expended its meagre finances and manpower on these privately owned animals without any benefit accruing to it. This practice has made the cost of running the LID farm enormous and burdensome.
- The Institute's stock of small ruminants (Goats and Sheep) at the LID farm is nil.
- Inadequate hay barn for the storage of bailed hay.
- Some of the paddocks still need to be fortified so as to avoid the animals breaking out and destroying the surrounding crop farms.
- Poor quality of concentrates due to non availability of feed raw materials.
- Non availability of a functional laboratory and equipment to carry out basic milk tests and other A.I. operations.
- Dilapidated offices, leaking roofs and lack of furniture for staff.

FUTURE PLANS

- To consistently remind the management of the Institute on the need to remove privately owned animals from the farm.
- Restocking of the farm with goats and sheep.

OUTSTATION LABORATORIES

The Institute satellite (Outstation) laboratories located in 23 States of the nation and the Federal capital carry out animal disease investigation and diagnosis, treatment and control with vaccine dissemination in the States where they are located and the contiguous States. They also serve as Collection Centres for referral samples. Six of the laboratories serve as Zonal laboratories and the remaining 17 as State laboratories as shown in the table below:

Table 10: Institute's Zonal and State Laboratories

S/No	Zones	Zonal Headquarters	Location of Laboratory
1.	Institute Headquarter	Vom*	Abuja, Bauchi, Makurdi, Shendam
2.	North East	Yola	Jalingo, Maiduguri, Yola
3.	North West – 1	Kano	Kaduna, Kano, Katsina
4.	North West – 2	Birnin Kebbi	Birnin Kebbi, Sokoto
5.	South East	Umidiike	Oji River, Umudike
6.	South South	Calabar	Calabar, Uyo
7.	South West	Akure	Akure, Benin, Ibadan, Ikire, Ilorin, Lagos

- Vom takes care of contiguous Outstation Laboratories

Achievements in 2014

The Institute's Outstation Laboratories through their services complemented the Veterinary activities of the various States where they are located and some contiguous States. These they did by making available relevant animal vaccines produced by NVRI, and assisted in veterinary services by conducting laboratory based diagnosis of bacterial and parasitic diseases.

The Outstation laboratories in the 23 States of the country were able to generate revenue to the tune of thirty two million, one hundred and sixty thousand naira (₦32,160,000.00) from vaccine sales. This represents about 15% of the total Internally Generated Revenue (IGR) of the Institute for the year 2014 and only 79.6% of the performance of 2013. The drop in performance was due to inadequate supply of vaccines to the outstations in 2014.

Challenges

- 1) Inadequate vaccine supply to Outstation Laboratories
- 2) Lack of mobility for prompt ambulatory services and vaccine delivery
- 3) Lack of full complement of staff in some laboratories
- 4) Lack of vital equipment and reagents laboratory activities
- 5) Lack of potable water for laboratories activities

Way Forward

- a) Better funding of Outstations Laboratories
- b) Provision of basic laboratory equipment
- c) Provision of basic reagents for bacteriology and parasitology
- d) Engagement of essential laboratory personnel
- e) Provision of vehicles to enhance mobility for Veterinary outreach to farms

PARASITOLOGY

Introduction

In line with the overall Mandate and Mission of the Institute, activities in the Parasitology Division during the year under review were organized and streamlined to; 1. Offer prompt and excellent diagnostic services to clients on various parasitic conditions. 2. Conducted research on some economically important parasitic diseases with the aim of providing treatment and control methods. 3. Assisted with the analyses of samples for postgraduate and undergraduate students for their final year projects. 4. Taught students posted to the Division for Student Industrial Work Experience Scheme (SIWES) and those on educational tours/visits.

Routine diagnostic services

A total of 233 blood samples were processed and analyzed for various parasitic infections in the Protozoology Unit of the Division. 21.5% (50/233) samples were positive for various haemoparasites. The most prevalent pathogens detected were *Babesia bigemina*, *B. bovis*, *Trypanosoma congolense*, *B. canis*, *Ehrlichia canis*, *Hepatozoan canis*, *Cowdria (Ehrlichia) ruminantium* and *Anaplasma marginale* (Table 11 below). Our result indicates that *Trypanosoma congolense* occur in herds in plateau state and causes severe anaemia in affected herds.

In the **Helminthology Unit**, total of 366 fecal and intestinal samples were received and processed. Of this number 184 (50.3%) were positive for various parasite eggs and ova. Animal species from which samples were received and processed include; Bovine 133, Caprine 18, Laprine 17, Canine 24 and Avian 174. The prevalence of helminthes eggs/ova are 66.9%, 33.3%, 29.4% 45.8% and 42% for Bovine, caprine, laprine, canine and Avian species respectively. The most commonly detected parasite eggs were *Oesphagostomum* spp, *Fasciola gigantica*, *Neosacaris vitulorum*, *Haemonchus contortus*, *Strongyloides* spp, *Eimeria* spp, *Ascaridia galli* etc. It was observed that most intestinal segments submitted for examination are positive for *Eimeria* spp even when the farmers admit to the administration of anti coccidial agents to the feed/water of the flock. This calls for a survey of *Eimeria* spp in poultry farms and determination of resistant strains in circulation in the country

The **Entomology Unit** received and processed 16 samples during the period under review. These samples includes, skin scrapping, ticks, fleas, lice and

termites. Identifications were done according to standard procedures. A total of 34 ticks, 1 louse, 2 fleas, 1 mite and 1 army ant were identified from the various specimens submitted.

Ethno-Veterinary Unit

In order to enhance the efficacy of the Scabicur™ products and facilitate registration with NAFDAC, the Division has reorganized and restructured our production facility. More so we have identified and in-cooperated an herbal component to our products. Field trials to evaluate efficacy, safety and tolerance of the product are ongoing with promising results. The unit has produced and supplied soap, lotion and cream to the Consultancy Unit of the Institute.

Postgraduate and undergraduate research

The Division assisted 3 postgraduate students from various Nigerian Universities on laboratory analysis of samples. They were also trained and assisted to isolate, identify, sporulate and quantify *Eimeria* species of poultry in preparation for their research work. Equally, 3 undergraduate students and 6 ND/HND were assisted with the analysis of their samples for their research projects.

Table 11: Summary of samples processed in Parasitology Division 2014

S/No	Animal host	Number of samples submitted	Number (%) positive	Parasite Types
Protozoology Unit				
1	Bovine	146	37 (25.3)	<i>Babesia bigemina</i> , <i>B. bovis</i> , <i>Trypanosoma congolense</i> , <i>Cowdria (Ehrlichia) ruminantium</i> and <i>Anaplasma marginale</i>
2	Canine	65	11 (16.9)	<i>Babesia canis</i> , <i>Ehrlichia canis</i> , <i>Hepatozoan canis</i> ,
3	Ovine	14	2 (14.3)	<i>Anaplasma marginale</i> , <i>Babesia ovis</i>
4	Swine	4	0 (0)	Nil
5	Wildlife	4	0 (0)	Nil
	Total	233	50(21.5)	

Helminthology Unit				
1	Bovine	133	89(66.9)	Oesphagostomum spp, <i>Fasciola gigantica</i> , <i>Neosacaris vitulorum</i> , <i>Haemonchus contortus</i> , Strongyloides spp,
2	Caprine	18	6(33.3)	Haemonchus sp, Strongyle sp
3	Lapine	17	5 (29.4)	Eimeria spp
4	Canine	24	11 (45.8)	Isospora spp. Ancylostoma spp, Ascaris spp
5	Avian	174	73 (42)	Eimeria spp, <i>Ascaridia galli</i>
	Total	366	184 (50.3)	
Entomology Unit				
1	Avian	2	2 (100)	Army ants
2	Canine	8	3 (37.5)	Rhipicephalus spp ticks (Nymph and adults)
3	Caprine	3	2 (75)	Amblyomma ticks (Nymph and adults)
4	Ovine	2	2 (100)	Amblyomma male and female adult ticks
5	Wildlife	1	1(100)	Amblyomma ticks, Ctenocephalide felis
	Total	16	10 (62.5)	

Constraints/Challenges

Lack of funds for surveillance and research activities

Newly supplied Enzyme Linked Immunosorbent Assay (ELISA) reader and water distiller not fully installed

Lack of consumables and reagents for use in the Molecular laboratory, as well as lack of complete gel documentation system, hindered the full operation of the Unit.

Future Plans

1. Registration of Scabicur with NAFDAC
2. Conduct active and passive surveillance and research on major parasitic diseases of livestock/poultry in Nigeria
3. Collect and preserve common parasites as positive slides, mounts or museum specimen for teaching and demonstration purposes

PLANNING, MONITORING & EVALUATION

The Division serves as the Databank of the Institute. It is charged with the Formulation, Co-ordination, Monitoring & Evaluation of the Institute's projects and programmes. It is also charged with the responsibility of collecting, collating and analyzing all kinds of data for effective implementation of the Institute's Mandates.

Activities

The Databank Unit of the Division processed several data relating to Research, Human Resource Development and Socio-Economic activities of the Institute such as, Quarterly Progress Report of NVRI Specialised Research Programmes, Staff Nominal Roll and Staff Training among others. These Data were sent to Federal Ministry of Agriculture & Rural Development, Agricultural Research Council of Nigeria (ARCN), Nigerian Communications Commission and Other Government Agencies.

In the year under review, the Databank unit also carried out the following activities;

- Inventory of the Institute's landed properties all over the country were updated
- Processed various data on Appointments, Promotions, Retirements/ Resignations, Various Postings to Divisions, Units and Departments, Change of Names and Cadres among others.
- The Hard copies of the Institute's map kept in a Map Cupboard and the backup Soft copy were maintained
- A database of the Institute's Furniture is being created
- The Inventory of all the computers of the institute was updated.
- The database of Visits of Dignitaries to the Institute was updated.

Some of these data collated were used to attend to various questionnaires that were brought to the institute within the year.

Human Resource Unit

The Unit processed and produced 153 staff ID cards in the year under review.

Statistics Section

The Section continued the compilation of Vaccine data for the year 2014.

Data collected were for Production (Bacterial, Viral), Sales and Stores.

The following figures show Viral and Bacterial Vaccine production Charts for the year under review

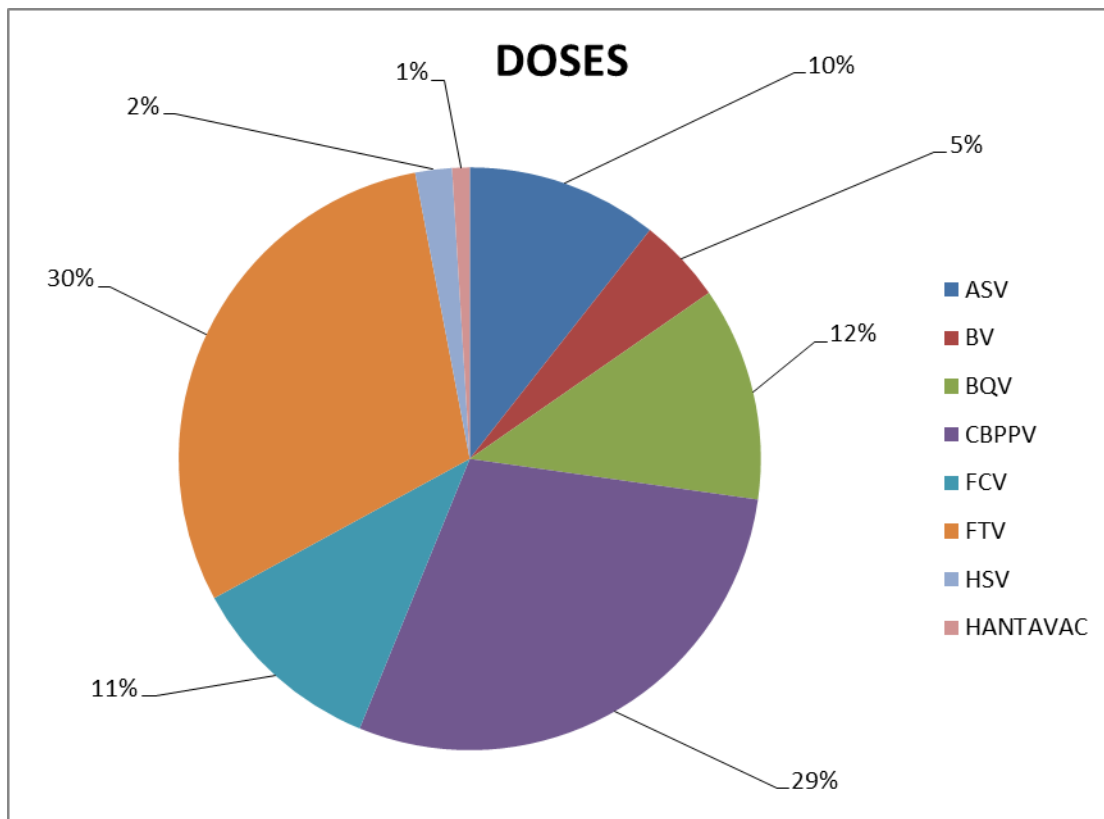


Fig.1: Viral Vaccine production chart.

Key:

ASV = Anthrax spore vaccine

BV = Brucella vaccine

BQV = Black quarter vaccine

CBPPV = Contagious bovine pleuropneumonia vaccine

FCV = Fowl cholera vaccine

FTV = Fowl typhoid vaccine

HSV = Haemorrhagic septicaemia vaccine

HANTAVAC = Clostridial vaccine

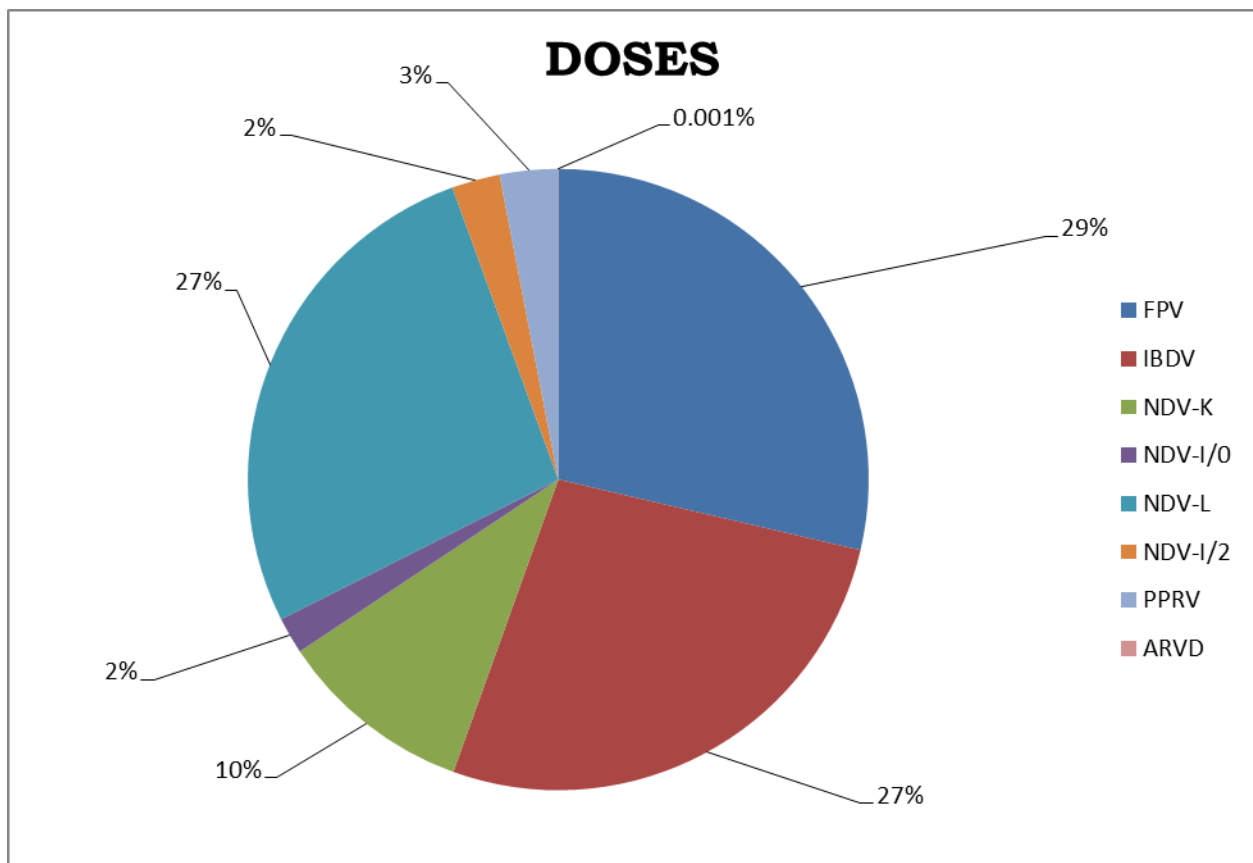


Fig. 2: Bacterial Vaccine production chart.

Note: The total vaccine production figure for 2014 is 98,423,748 doses.

Key:

FPV = Fowl pox vaccine

IBDV = Infectious bursal disease vaccine

NDV-K = Newcastle disease vaccine – Kamorov

NDV-I/O = Newcastle disease vaccine – Intraocular

NDV-L = Newcastle disease vaccine – Lasota

NDV-I/2 = Newcastle disease vaccine – (Thermostable)

PPRV = Peste des petit ruminants vaccine

ARVD = Anti-rabies vaccine for dogs

In the Section, several Research data were brought for analysis. The service was provided for staff and students from the neighboring schools.

The Section also received a staff on transfer to beef up its ranks and a student on industrial attachment from the ABU, Zaria during the year.

Monitoring and Evaluation Unit: The Statistician compiled an M&E report on the activities of the Institute for the years 2001 to 2012. The report indicates that the Institute runs over 116 programs of activities spanning 7 Divisions of the Institute. The report further indicates that 90% of the content of the annual reports for the years cited are monitoring in content. Only about 3% of the content of the reports is evaluative in content. This content is provided by the Quality Control Division of the Institute which is able to conduct process evaluation of some programmes in the vaccine production divisions of the institute. The report observes that generally, process evaluation is resisted by divisions of the Institute. The M&E department of the Planning, monitoring and evaluation division could only resort to an outcome evaluation for the time being.

Contributory Pension Scheme

1. Data of NVRI Staff due to retire between January, 2015 and December, 2015 was submitted to PENCOM on 19th February 2014. The submission was in accordance with PENCOM required format for the purpose of organizing 'Verification and Enrolment Exercise' for the affected persons.
2. NVRI staff due to retire between January, 2015 to December, 2015 were presented for Verification and Enrolment exercise by PENCOM in Makurdi on 22nd May, 2014.
3. Confirmed data of Staff due to retire between January, 2015 and December, 2015 was submitted to PENCOM on 5th November 2014.
4. Delayed payment of retirement benefit for some retired and disengaged staff of NVRI was properly addressed

5. Payments of deceased staff Pension contribution to their respective Next-of-Kin were processed.
6. Problem of 'Zero balance' in Retirement Saving Accounts of affected staff who reported their cases was adequately addressed
7. Bulk remittance of contribution backlog was effected for affected officers.
8. Anomaly of Multiple registrations (registration with two different Pension Fund Administrators) by some staff was handled.

The **National Health Insurance Scheme Unit:** During the year under review, a total of 203 NHIS forms were processed. These were forms for registration, addition of dependants, and change of data and Primary Healthcare Providers among others. Those who were registered during the period under review and their names have appeared in the database of NHIS have been issued printouts to enable them access their healthcare providers pending the receipt of the identity cards. However, a list of staff without NHIS ID cards were compiled and sent to the NHIS office in Abuja. Every quota, the updated NHIS lists were obtained to enable staff verify their change of registration data and for issuance of printouts. The representative of the Institute's Health Maintenance Organization (HMO); the International Health Management Services (IHMS) was in the Institute on 24th April, 2014 on routine visit to enlighten and address questions and problems relating to the Scheme.

Similarly, on the 13th October, 2014, a sensitization workshop was held on the topic, Overview of the National Health Insurance Scheme/Benefit Package .This is to enlighten staff on what the scheme is all about and its benefit package. It was to also equip staff so that they know their rights and are not shortchanged by their healthcare providers. Resource persons came from the NHIS.

Tenders Board / Procurement Unit Annual Report.

The Tenders Board/Procurement unit of the Planning Department has continued to discharge its mandate of ensuring adherence to Due Process procedures in the award of contracts via advertisements, pre-qualification, open competitive bidding, financial analysis in providing goods and services thereby contributing to the attainment of the objectives/vision of the entire institute.

Notable Activities in the Year

Adherence to public procurement act 2007 in carrying out procurement activities for 2014.

Challenges

Due to the increasing volume of work in attaining the objectives/vision of the entire institute in procuring goods and services received for different department of the Institute, the unit is faced with inadequate office space, especially for keeping sensitive documents.

The **SERVICOM Unit** is geared to improve the attitude of staff towards work as enshrined in the SERVICOM Charter.

The Unit, in the year under review has been accepted to be the one- stop- point for both first timers and existing clients to the Institute who want and seek Information or services of the Institute. It also liaised and made suggestions to the various Departments and service front liners; the sales and Liquid Nitrogen Units on their service delivery and ensured their conformity with SERVICOM approved guidelines in the submission of their Charters.

Cyber café unit

This unit comprises of an IT team of staff located in the NVRI Cyber cafe responsible for internet services and interconnectivity, resolving internet downtimes, software upgrades, installations, troubleshooting hardware and IT equipment maintenance within the Institute.

The team experienced some constraints listed below:

- I. Numerous downtimes recorded from the ISP for long intervals.
- II. Lack of software for installations, upgrades and maintenance.
- III. Lack of hardware replacement components and devices.
- IV. Limited number of computer systems available for users.

Challenges

- a. Inadequate office space, especially for keeping sensitive documents.
- b. Insufficient copies of SERVICOM Work Ethic fliers and Handout booklets for sensitization of customers

Future Plans

The Cyber Café hopes to raise its capacity for service delivery in line with global practices in order to function effectively as a support system to the research activities of National Veterinary Research Institute Vom.

POULTRY

Function/mandate of the Division

- To produce fertile eggs for the production of various Poultry vaccines.
- To produce chicks for vaccine testing and Research purposes.
- Introduction, adaptation and disease management of exotic breeds of Poultry

Specific Activities in the year

- (a) Production of fertile eggs/birds for vaccines production and Research
- (b) NVRI/GCL Collaborative research project on Moringa
- (c) Production of birds for Research (Ducks, G/fowl, Quail, , Black bantam, Geese)

Achievements

- (a) Additional Vaccine birds were procured and raised successfully and will be into full egg production, in February, 2015.
- (b) Vaccine egg supply to the production laboratories was increased.
- (c) Collaborative research work with Grand Cereal Limited on feed trials in the farm is ongoing.
- (d) Quail birds and other species of birds with their eggs were produced in the farm. These with their products (egg and meat) were sold.
- (e) Two hand mowing machines were procured and it helped in the maintenance of the rapid growing grasses in the division, thus, enhancing the farm's bio-security.

Challenges

- Dilapidated hatchery due to damage by rainstorm
- Old and obsolete incubators that need urgent replacement
- Lack of mini Poultry processing plant
- Dilapidating admin block/staff offices
- Inadequate staff strength (junior)

Health section

In the year under review, the health section of the division in collaboration with the central diagnostic Laboratory (CDL) diagnosed a number of diseases affecting the birds in the division as indicated in the table below:

Table 12: Diseases recorded in birds in the Poultry Division in 2014

S/No.	Disease	Number Affected	Percentage
1.	Salmonellosis	30	49
2.	Newcastle Disease	17	27
3.	Coccidiocis	8	13
4.	Infectious Bursal Disease	3	4
5.	Chronic Respiratory Disease	3	4
6.	Others	2	3
Total		63	63

Future plans

1. To stock layers (brown eggers) for table eggs
2. To produce turkey broilers for table meat

Egg Production and Utilization

Table 13: Vaccine Birds' Egg Production & Disposal in 2014

Month	Collection	Virology setting	Broken	Visitors/Entert	Bacon/factory	Dead Embryo	Infertile	Hatching
Jan	55,744	18,440	13,762	8,232	9,810	2,013	820	5,500
Feb	60,183	27,665	12,838	9,630	9,990	45	4	60
March	68,094	28,090	14,518	8,336	11,650	3,000	1,100	5,500
April	60,403	20,880	14,000	9,873	15,650			
May	65,533	30,290	13,243	3,330	11,370	2,387	1,579	7,300
June	57,944	13,060	13,347	3,630	20,880	595	595	3,400
July	61,174	26,095	12,720	6,836	19,950	512	498	
August	51,460	238	12,570	6,070	5,940	40	42	
Sept.	46,721	20,270	11,476	5,465	12,210			
Oct.	51,258	21,740	10,550	4,920	13,920			
Nov.	49,147	21,600	11,208	6,859	9,480			
Dec.	37,202	3,445	12,297	9,460	12,000			
Total	656,863	231,813	152,529	82,641	152,850	8,592	4,638	21,760

Table 14: Egg Production from Other Species of Birds in 2014

Month	Quail	Ducks	Turkeys	Guinea Fowls	Black Bantam	Naked Neck	Geese
Jan	81,341	1,708	48	220	210	317	39
Feb	91,469	2,044	38	717	276	428	21
March	91,455	3,178	64	1,108	500	733	17
April	95,886	3,753	62	988	432	608	24
May	119,366	4,194	58	984	414	614	7
June	141,352	4,054	35	915	497	582	5
July	139,551	3,770	12	908	557	417	
August	119,575	2,982	19	991	536	573	
Sept.	135,564	3,003	1	730	449	495	15
Oct.	155,258	2,370	4	604	518	444	22
Nov.	117,479	2,971	17	262	435	352	18
Dec.	62,012	2,695	15	134	664	212	20
Total	1,350,308	37,622	373	9,475	5,488	5,775	188

Table 15: Vaccine Eggs Supplied to Production and Research Laboratories in 2014

Month	LID	NDV (I/2)	Quality Control	AI/TADS	VVPD	IBDV	FPV	Total
Jan	30	-	210	1,600	-	1,600		3,440
Feb	45	-	420	1,600	-	1,600		3,665
March	60	-	630	1,800	-	1,600		4,090
April	60	-	420	1,400	-	1,200		3,080
May	60	-	630	1,600	-	2,000		4,290
June	60	-	-	600	-	400		1,060
July	75	-	420	600	-	-	4,000	5,095
August	60	1,200	420	1,000	-	1,200	4,000	5,880
Sept.	60	1,200	210	600	-	1,200	2,000	5,270
Oct.	30	600	210	400	300	1,200	3,000	5,740
Nov.	60	600	240	600	300	1,600	2,000	5,400
Dec.	45	-	-	-	-	400		445
Total	645	3,600	3,990	11,800	600	14,000	15,000	49,635

Key: LID – Livestock Investigation Division

AI/TADS – Avian Influenza/Trans-boundary Animal Diseases

VVPD - Viral Vaccine Production Division

IBDV – Infectious Bursal Disease Vaccine

FPV – Fowl Pox Vaccine

NDVI/2 - Newcastle Disease Vaccine (Thermostable)

PRINTING AND PUBLICATION

The Printing and Publications Division of the National Veterinary Research Institute, Vom, was established as a Service Department of the Institute, to meet its numerous printing requirements; viz: Vaccine labels, Scientific Journals, Official Sales Invoices, Officials Receipts, File jackets and official headed papers and envelops.

The following jobs, shown in Table 16 below, were executed during the accounting year, 2014 by the Division.

Table 16: Materials Produced by the Printing Press in 2014

S/N	Job Title	Quantity Produced
1	Vaccine labels of various types	130,520
2	Annual Report	300 copies
3	Official Letter headed paper	1000 copies
4	Official cash Receipt	300 booklets
5	Official S T R	300 booklets
6	Envelops for EDVR	300 copies

Challenges

Challenges include;

- Lack of modern printing equipment
- Shortage of Technical staff
- Lack of conveniences in the division

Future Plan

- The Division will want to adopt printing technology that will best suit the need of the Institute in these modern times
- Engagement of five (5) additional technical staff for better service delivery

QUALITY CONTROL

Functions/Mandate

The Quality Control Division of the National Veterinary Research Institute is responsible for the implementation of a quality management system in the production of veterinary vaccines, biologicals and general laboratory procedures in the Institute in accordance to international standards. Quality control tests are therefore routinely carried out on representative samples of all vaccine batches with emphasis on packaging, labeling, purity, sterility and viability. All these tests are geared towards ascertaining that vaccines produced by the Institute are fit for field use.

In addition, the division carries out periodic assessment and auditing of all the Institutes laboratories to ensure compliance to Good Laboratory Practice in accordance to International standards.

Specific activities in 2014

A. Vaccine Quality Control Tests

a) Bacterial Vaccines

A total of 46 batches of 8 Bacterial vaccines were sent to the division out of which 41 were tested. These include (table 17 below):

Table 17: Bacterial Vaccines subjected to Quality Control Tests

S/No.	Type of Vaccine	Batch of Vaccine	Total No. of Batches
1.	Fowl Cholera	01/14, 02/14, 03/14, 04/14, 05/14, 06/14, 07/14, 08/14, 09/14, 10/14	10
2.	Fowl Typhoid	01/14, 02/14, 04/14, 05/14, 06/14, 08/14, 09/14	7
3.	BAV	01/14	1
4.	Haemorrhagic Septicaemia	01/14, 02/14, 03/14, 04/14, 05/14, 06/14, 07/14, 08/14	8
5.	Anthrax Spore	01/14, 02/14, 03/14, 04/14	4
6.	Hantavac	01/14, 02/, 03/14	3
7.	Black Quarter	01/14, 02/14, 03/14	3
8.	CBPP	01/14, 02/14, 03/14, 04/14, 05/14	5
TOTAL			41

All vaccines tested passed the stipulated Quality control tests

b) Viral Vaccines

A total of 73 batches of viral vaccines were sent to the division out of which 52 were tested. These include (table 18):

Table 18: Viral Vaccines subjected to Quality Control Tests

S/No.	Type of Vaccine	Batch of Vaccine	Total No. of Batches
1.	NDVL	01/14-08/14, 10/14-16/14, 19/14-25/14	21
2.	NDVK	01/14, 02/14, 03/14	3
3.	NDV i/o	01/14 and 03/14	2
4.	NDV I ₂	01/14, 02/14, 03/14, 04/14, 05/14, 06/14	6
5.	IBDV	01/14, 02/14, 3/14, 04/14, 06/14, 07/14, 08/14, 09/14, 11/14, 12/14, 13/14, 14/14, 15/14, 16/14	14
6.	PPR	05/14, 07/14, 08/14	3
7.	LSD	01/14, 02/14	2
8.	SGPV	01/14	1
TOTAL			52

Note: All vaccines tested passed the stipulated Quality control tests except for PPR which had a low titre

b. Vaccines sent to Pan Africa Veterinary Vaccine Centre (PANVAC), DebreZeit, Ethiopia for External Quality Control Tests

The following vaccines / number of batches were sent to PANVAC in June and July, 2014: Anti Rabies Vaccine (ARV;1 batch), Infectious Bursal Disease Vaccine (IBDV; 1 batch), Newcastle Disease Vaccine Lasota (NDVL; 3 batches), *Newcastle Disease Vaccine - Komarov* (NDVK; 3 batches), Newcastle Disease Vaccine Intraocular (NDV_{i/o}; 2 batches), Newcastle Disease Vaccine I₂ (NDVI₂; 1 batch), Peste des Petits Ruminants Vaccine (PPR; 1 batch), Fowl Pox Vaccine (FPV; 2 batches), Fowl Typhoid Vaccine (FTV; 2 batches), *Brucella abortus* Vaccine (BAV; 1 batch), Haemorrhagic Septicaemia Vaccine (HSV; 1 batch), Black Quarter Vaccine (BQV; 2 batches), Fowl Cholera Vaccine (FCV; 3

batches), Anthrax Spore Vaccine (ASV; 3 batches), (Hantavac) (HTV; 1 batch), Contagious Bovine Pleuro Pneumonia Vaccine (CBPPV; 1 batch).

Major achievement

All the stipulated tests carried out on individual vaccine types in the division have been updated to meet the guidelines outlined by the regulatory body; Office of International Epizootics (OIE). Thus the division has been able to upgrade all its procedures and associated documentation to International standards comparable to Quality control reference laboratories' worldwide with the exception of safety and purity tests which shall be done once the needed housing and materials are provided.

Challenges

1. Lack of PCR equipment and reagents in the Molecular Biology laboratory. Lack of some routine reagents, wares, media bases, various sera, specialized sterility tubes and a few other essential things.
2. Lack of Vacuum pump, Moisture Analyzer and CO₂ incubator
3. Inadequate water and power supply to the division
4. Lack of Experimental house and associated experimental animals needed to facilitate quality control tests on safety and potency in accordance with international standards.
5. The incessant strike actions were a major drawback to the activities of the division.

Future Plans

- a) Collaboration with the National Agency For Food and Drug Administration and Control (NAFDAC) on quality tests for all vaccines earmarked for importation into the country
- b) Provision of Quality Control services to the public on commercial basis on Veterinary and Human vaccines and biological once the experimental animal house and laboratory animals are made available to the division

REGIONAL LABORATORY FOR AVIAN INFLUENZA (AI) AND OTHER TRANSBOUNDARY ANIMAL DISEASES (TAD)

A total of 1,388 samples comprising of 722 oropharyngeal swabs, 231 cloacal swabs, 256 environmental samples, and 179 sera were received from five states including Lagos, Ogun, Cross River, Plateau and Kaduna states in an active surveillance of Live Bird Markets in 2014. The samples were analyzed using Polymerase Chain Reaction (PCR). All the swab samples were negative for Influenza A/H7N9 virus by PCR.

Below is the breakdown of samples received per state:

Table 19: Samples received from the States

S/No	State	Nasal Swabs	Environmental Samples	Sera	Cloacal Swabs	Total
1.	Plateau	150	69	37	60	316
2.	Ogun	142	37	33	40	252
3.	Cross River	150	60	30	50	290
4.	Kaduna	150	70	30	50	300
5.	Lagos	130	20	49	31	230
Total		722	256	179	231	1388

Apart from active surveillance carried out by the Regional Laboratory, samples were also received through passive surveillance throughout the year 2014 as shown in the table below:

Table 20: Summary of samples received through passive surveillance in 2014

Months	Number of Samples				Number positive (tissues)			Number Negative (tissues)			
	AIV*	NDV\$	IBDV+	Pox Virus	AIV	NDV	IBDV	AIV	NDV	IBDV	Pox Virus
January	12	12	Nil	Nil	Nil	Nil	Nil	25	25	Nil	Nil
February	9	9	4	Nil	Nil	Nil	4	9	9	Nil	Nil
March	7	7	1	Nil	Nil	Nil	1	7	7	Nil	Nil
April	14	14	1	Nil	Nil	Nil	Nil	14	14	1	Nil
May	10	10	Nil	Nil	Nil	Nil	Nil	10	10	Nil	Nil
June	8	8	1	2	Nil	Nil	Nil	8	8	1	2
July	13	13	3	Nil	Nil	Nil	Nil	13	13	3	Nil
August	12	12	Nil	Nil	Nil	Nil	Nil	12	12	Nil	Nil
September	4	4	5	Nil	Nil	Nil	Nil	4	4	5	Nil
October	18	18	Nil	Nil	Nil	Nil	Nil	18	18	Nil	Nil
November	2	2	1	Nil	Nil	Nil	Nil	2	2	1	Nil
Total	109	109	16	2	Nil	Nil	5	109	109	10	2

*Avian Influenza Virus; \$Newcastle Disease Virus; +Infectious Bursa Disease Virus

STAFF PRIMARY SCHOOL

The school has three sections, which are; Nursery section that is Nursery 1- 3, Junior Primary and Senior Primary

The school has three terms per session. The First Term (Sept 16–Dec 13, 2013), Second Term (Jan 13- April 11, 2014) and Third Term (May 5-July 25, 2014).

The school conducts Termly examinations and prepares pupils for entrance examination into standard secondary schools in the country

The school activities are being guided by the curriculum and syllabus from both the Federal and State Ministries of Education.

Apart from carrying out the normal academic activities, the school organizes Open Day, educational trips and excursions and sports. In addition the school also organizes internal/external workshops and seminars for the teachers.

Notable Activities of 2014:

Internal Examinations:

The school in each of the terms conducted three continuous assessment tests before the examinations. The first, second and third terms' examinations were conducted and results given to pupils on the closing day. The children's performances were very impressive.

Sports:

The 16th Annual Inter-House Sports Competition was held on Friday the 14th November, 2014. In attendance were the Chief Host; Executive Director, Dr M.S Ahmed, represented by the Director, Production, Dr A.E. Itodo. Others were the Host; Mrs. E.P. Wapmuk (Chairperson, NVRI Staff School Management Board), PTA Chairman (Rev. R.E. Odiaka), parents and other invited guests. Mrs. G. N. Chima was the Chairlady of the occasion.

At the end of the competition, the following results were recorded.

Table 21: Results of 16th Annual Inter-House Sports Competition

S/No	House	Total Scores	Position
1	Red House	756	1 st
2	Blue House	740	2 nd
3	Green House	726	3 rd
4	Yellow House	647	4 th

It was a memorable occasion for the pupils and students.

Academic Performance

The Internal Examinations were conducted in all the classes and result were given to the pupils at the end of each term. Generally, the results were impressive in all classes. The children in primary five and six sat for ten (10) different secondary schools entrance examinations of their choice and scored a cumulative average of 100% as recorded below.

Table 22: Results of Entrance Examination in 2014

S/No	Name of School	Number of Candidates	Number that Passed	% Pass
1	NVRI Staff Secondary School, Vom	25	25	100%
2	St Joseph's College, Vom	6	6	100%
3	St Louis College, Jos	3	3	100%
4	Command Secondary School, Jos	3	3	100%
5	ECWA Secondary School, Maingo	3	3	100%
6	Federal Government Colleges	15	15	100%
7	Corpus Christi Comp. College kwall, Bassa LGA	1	1	100%
8	Bethany Secondary school	1	1	100%
9	National Mathematics Centre, kwali Abuja	1	1	100%
10	Boys Secondary School, Gindiri	2	2	100%

- Cumulative Average = 100%

- Two children sat for International Mathematics competition and passed. They were to represent the country in South Korea but could not make it due to funds.
- The two children also came best in NTA project exhibition on environmental protection organized in Jos.

2014 Joint Annual Speech and Prize Giving Ceremony

The school organized the night (9th) Joint Annual Graduation Speech and Prize Giving Ceremony on Wednesday 23rd July, 2014 at 10am prompt and Prof. H. G. Sharubutu (mni) was the Chairman of the Day. The programme was well attended by invited dignitaries, Management, Staff of the Schools and Institute, Students and the pupils. It was a memorable occasion for the pupils and students as they received both academic and non-academic prizes. A total of fifty three (53) Pupils graduated from primary six to different colleges while seventy one (71) graduated from Nursery Section into Primary one.

School Clinic

Immunization against Measles, polio, Meningitis, Dewormer and vitamin A were given to pupils according to their ages during the year.

Deaths

Three (3) pupils of the school died in the month of September, 2014; May their soul rest in peace with the Lord, Amen.

Students on Teaching Practice/Corps Members

Three (3) students from Federal College of Education Pankshin, College of Education Gindiri and NTI Jos Study Centre were in the school for teaching practice and three (3) NYSC members were posted to the school.

Challenges:

- Replacement of two transferred Staff.
- Inadequate number of play materials at the playgrounds.

- Shortage of Teachers in French, Music, English Language, Mathematics, Fine Arts, Physical and Health education and Computer Education.
- Lack of Sporting materials
- Lack of school library, laboratory and Assembly Hall
- Insufficient desks in the school.
- Loss of two Class Assistants and the need for replacement

STAFF SECONDARY SCHOOL

Achievements in 2014

- In the year under review, the school graduated 51 students who sat for both WAEC and NECO examinations.
- The print out of the results and the analysis showing the school's performance in 2014 are as shown in Tables 22 and 23 below.
- The school organized an orientation programme for its JSS1 and other new students admitted into the school.
- The school represented Jos South Area Directorate at the All Plateau State Secondary School Games in Pankshin.
- At the Otukpo 2014 Secondary School Games, the school represented Plateau State in 3000 metres Junior girls and won a Silver Medal (2nd position) ;
- The Speech and Prize Giving Day for the 2013/2014 Academic Session was held on the 24th July, 2014.
- The 15th Inter-House Sports Competition was held on the 14th November, 2014 with Red House emerging as the winner.
- To prevent the entry and spread of Ebola, the Institute built a six-point platform for the students for regular hand wash.
- The Executive Director, Dr M. S. Ahmed, visited the school to inspect the hand wash that was constructed
- The P.T.A. donated another set of 15 computers to the school
- The National Examinations Council accreditation team visited the school for accreditation.
- The third Edition of the schools magazine "Voice of the Future" was released.
- A number of the school graduates secured admission into higher institutions of learning. Find below a few among others:

Table 23: Students of Staff School Admitted to Higher Institutions

S/No.	Name of Student	Institution Admitted	Where	Course
1.	Sarah Danbaki	FCAH &PT		C/Science
2.	Grace Adeboye	Univ. of Ibadan		Geology
3.	Seun Murewa	NDA Kaduna		Air Force
4.	Deborah Kujul	Uni. Agric. Makurdi		Vet. Med
5.	Abinya Jonah	Uni. Agric. Makurdi		Vet Med
6.	Ishaya Mwantep	FCAH & PT		Agric.Tech

TABLE 24: Analysis of 2014 WASSCE Result

S/N	Subject	A1	B2	B3	C4	C5	C6	D7	E8	F9	Pass
1	English				5	3	10	16	12	6	88.5
2	Mathematics			6	1	11	28	3	3		100
3	Civic Education	24	3	7							100
4	Biology			8	10	10	17	2			100
5	Chemistry			1	3	5	13	4	2	1	96.6
6	Physics			3		4	10	7	4	1	96.6
7	Further Maths							1	2		100
8	Agric. Science	1	2	6	4	1	3				100
9	Computer			5	10	3	7	5			100
10	Home Mgt		1	5	4	3	3				100
11	CRS		1	8	5	5	16	2	2		100
12	History				1	3	2	1	1		100
13	Geography	1	1	8	3	2	2				100
14	Government			5	1	3	4	1		1	93.3
15	Economics					3	12	20	6	4	91.1
16	Literature					3	4	3			100
17	French									1	0

Overall % Pass = 90.2%

TABLE 25: Analysis of 2014 NECO SSCE Result by Subjects

S/N	Subject	A1	B2	B3	C4	C5	C6	D7	E8	F9	Pass
1	English			2	2	29	18				100
2	Mathematics			1		11	29	7	3		100
3	Civic Education			3	5	19	22	1			100
4	Biology					20	30	1			100
5	Chemistry					19	9				100
6	Physics					13	15				100
7	Futher Maths						4	1			100
8	Agric. Science					9	2				100
9	Computer					1	29	9	1		100
10	Home Mgt					7					100
11	CRS				2	8	17	3			100
12	History					2	5	1			100
13	Geography					7	16				100
14	Government				1	9	5				100
15	Economics					6	18	6	1		100
16	Literature					4	5	1			100
17	French					1					100
18	Commerce					2	10				100
19	Catering Craft Practice					1	1				100

Overall % Pass = 100%

Challenges

During the outgoing academic year, the school appealed to the Institute to help meet up these challenges and constraints which is biting the school so hard. They are:

1. Lack, of Science Laboratories
2. Lack of Library and facilities
3. Teachers in CRS, Home Management, Arts and French to replace those who retired and those who passed on.
4. Lack of examination Hall
5. Replacement and construction of more desks for the students.
6. Games and Sporting facilities for the school
7. A messenger and school cleaner
8. School Bus.

STORES

Main Stores

The Institute Main Stores comprises of the following classifications: Expendable, Non- Expendable, Consumables, Glass-wares, Drugs, Chemicals and Reagents. The Stores' stock in hand is worth ₦214,744,053.22 as at December 2014. These include:

- Drugs, Chemicals and Reagents	-	₦37,007,462.77
- Glass-wares	-	₦33,894,065.87
- Consumables	-	₦62,819,734.69
- Expendables and Non-expendables	-	₦81,022,789.92

Receiving Section

The receiving section is saddled with the responsibility of taking all delivery, sorting, inspection and processing for payments. All consignments received from suppliers and the processed deliveries are transferred to the various stores for onward documentation, storage and issue.

During the period under review, a total of **₦369,007,534.54** was expended on consignment received from suppliers as shown in Table below

Table 26: Items received and amount expended

S/N	Description Of Items	1 st Qtr(₦)	2 nd Qtr (₦)	3 rd Qtr (₦)	4 th Qtr (₦)	Total (₦)
1.	Diesel	28,985,000.00	26,035,000.00	30,444,200	29,700,000.00	115,164,200.00
2.	Lab Equipment	-	85,734,668.04	-	3,360,040.00	89,094,708.04
3.	Lab Consumable/ Uniform	1,065,600.00	-	5,287,973.66	58,350.00	6,406,923.66
4.	Office Equipment	8,000.00	1,216,000.00	-	1,471,625.00	2,695,625.00
5.	Stationery	-	1,132,500.00	557,240.00	1,414,266.25	3,104,006.25
6.	Feeds/Concentrate	2,546,925.00	2,510,250.00	16,413,500.00	1,999,250.00	23,469,925.00
7.	Cooking Gas	-	496,000.00	-	-	496,000.00
8.	Building Materials	-	-	452,000.00	-	452,000.00
9.	Packaging Material	3,000,000.00	1,550,000.00	4,627,854.00	-	9,177,854.00
10	Security Gadgets(siren)	-	-	620,000.00	-	620,000.00
11	Plant Equipment	-	-	44,029,789.29	1,927,250.00	45,967,039.29
12	Fertilizer	-	1,490,000.00	-	-	1,490,000.00
13	Lubricant/Engine Oil	569,100.00	-	-	-	569,100.00

14	Drugs/Chemicals/Reagent/Media	235,750.00	222,000.00	392,750.00	2,450,763.30	3,301,263.30
15	Grains	14,400,000.00	17,700,000.00	14,700,000.00	19,500,000.00	61,500,000.00
16	Repair of Cold Room	-	-	-	127,000.00	127,000.00
17	Cleaning Implements	-	-	48,040.00	-	48,040.00
18	Consumables	-	-	523,850.00	-	523,850.00
	TOTAL	50,810,375.00	138,086,418.04	118,092,196.95	62,018,544.55	369,007,534.54

Ledger/Documentation Section

The Ledger/Documentation comprises of the following sub-units; Ledger, Plants, Security Document and Furniture.

The unit carried out the following tasks:

- The Ledger received all incoming store vouchers and store issue vouchers for non-expendables, consumables, Glass-wares; Drugs, Chemicals and Reagents, Plants, Furniture and its Documentation.
- The Ledger ensures the proper documentations such as posting and filing of these documents for future references.
- It ensures posting of receipts, issues and costing of materials.
- The Ledger keeps receipts and other security documents for the Institute; these are issued to Accounts and other departments, these receipts are issued based on approved applications or requirements.
- The plant ledger has a stock in hand worth ₦5,892,504.00 as at 31st December, 2014.

Table 27: Balance of Plants as at 31st December, 2014

Name of Refrigerator/Freezer	Quantity	Amount (₦)
Refrigerator 250	13	1,183,000.00
Chest freezer 379	6	704,700.00
Refrigerator 350	7	803,600.00
Refrigerator 137	3	134,800.00
Refrigerator 300	28	1,136,000.00
Refrigerator 211	1	70,000.00
Chest Freezer 219	1	78,300.00
Chest Freezer 66	4	194,400.00
Chest Freezer 203	2	148,500.00
Chest Freezer 519	3	546,000.00
Electric Gas Cooker	2	169,154.00
Chest Freezer	1	250,000.00
Chest Freezer 429	3	409,050.00
Refrigerator	1	65,000.00
Total		₦5,892,504.00

Vaccine Section**Table 28: Stock Movement (Quantity)**

Description	Viral Vaccines (Doses)	Bacterial Vaccines (Doses)	Total (Doses)
Opening Balance	6,303,677	2,630,180	8,934,457
Add Receipts	82,793,118	17,717,400	100,510,518
Total Available	89,096,795	20,348,180	109,444,975
Less Issues	87,441,545	18,898,740	106,340,285
Balance C/F	1,655,250	1,449,440	3,104,690

Table 29: Stock Movement (Naira)

Description	Viral Vaccines (Naira)	Bacterial Vaccines (Naira)	Total (Naira)
Opening Balance	12,201,600.00	7,802,700.00	20,004,300.00
Add: Receipts	102,669,150.00	43,042,600.00	145,711,750.00
Total Available	114,870,750.00	50,845,300.00	165,716,050.00
Less: Releases	112,387,650.00	45,356,100.00	157,743,750.00
Balance C/F	2,483,100.00	5,489,200.00	7,972,300.00

Table 30: Stock Movement (Comparison between 2013 and 2014):

Description	Vaccines Activity in 2013	Vaccines Activity in 2014	Difference
Opening Balance	8,934,457	9,115,072	
Add: Receipts	100,510,518	91,657,091	8,853,427
Total Available	109,444,975	100,772,163	
Less: Releases	106,340,285	91,837,706	14,502,579
Balance C/F	3,104,690	8,934,457	

2014 production saw an increase of 8,853,427 doses (9.7%) of various vaccines while releases when up by 14,502,579 doses (15.8%).

Achievements:

- Timely receipt and issue of vaccines.
- Servicing of cold room was carried out.
- Harmonious/coordinated working relationship with sales & production units has been achieved.

Problems:

- Demand for vaccines outweighed its production.
- Vaccines are packed in cartons instead of arranged trays.
- None issuance of LPVs by production units on vaccines dispatch.

VETERINARY EXTENSION AND RESEARCH LIAISON SERVICES

The Division carries out all the extension activities of the Institute. It packages technologies released from the Research Divisions for dissemination to livestock and poultry farmers in the country. Questions from farmers are addressed and disseminated using appropriate medium for others to benefit.

Extension activities are executed through:

- OFAR (On-Farm-Adaptive-Research Trials)
- Monthly technology review meetings (MTRM)
- Surveys (thematic and general)
- Training workshops
- Publications (print and electronic)
- Meetings
- WIA (Women in Agriculture)

OFAR

There were no OFAR trials carried out in 2014.

MTRM

Invitations were received from Nasarawa and Niger. Two from NADP, all were attended except the one from Niger State.

Surveys

Neither thematic nor diagnostic survey was carried out during the year under review.

Training Workshop

There were three WAAPP training workshops all were attended.

Publications

Electronic

Five Hausa episodes of Muleka Rugage radio programmes covering various aspects of livestock and poultry diseases were produced and aired on FRCN Kaduna. The Yoruba, Ibo and Pidgin English editions could not be aired because of lack of funds.

Print

Five Extension Bulletins are in the proof reading stage. Three News bulletins were produced and circulated.

Meetings

Two North-Central Zonal steering committee meetings were attended. The Institute participated in the 2014 National Extension calendar harmonization meeting held in NAERLS, Zaria.

Agricultural Shows

The Institute participated in the 2014 National Agricultural Show.

Gender Mainstreaming in Agriculture

Under WAAPP the demonstration plots of maize in Chakarum and rice in Kogom were managed by women.

WAAPP Activities

All the farmers that adopted the improved maize and rice seeds in all the adopted villages had bumper harvest. The maize harvest in Staff school and Chakarum demonstration farms was just average, this is attributed to late land preparation due to some logistic problems. The same problem led to the average rice harvest from rice demonstration farm in Kogom

In the course of the year, the WAAPP external Monitoring and Evaluation Officer came to evaluate the projects. He was taken round all the project areas.

VIRAL RESEARCH

Mandate

To conduct research, undertake surveillance and disease diagnosis and development of biological with reference to African swine fever, African horse Sickness, Foot and Mouth disease, Skin diseases of viral aetiology, PPR, NDV₁₂, Parainfluenza-3 and Rabies

Notable activities of Viral Research Division (VRD) in 2014

1. Successful development of Capripox vaccine
2. The Period under review witnessed the approval and commencement of FMD Twinning programme by OIE between National Veterinary Research Institute and The CODA-CERVA (Veterinary and Agrochemical Research Centre) Belgium.
3. Securing of a grant from the World Bank WAAP- Nigeria to undertake the development of improved foot-and-mouth disease (FMD) virus vaccine in Nigeria using indigenous isolates.
4. On-going Field trials of NDV₁₂ vaccine

Foot and Mouth Section

During the period under review, 48 Epithelial/vesicular fluids were collected from cattle and sheep from Plateau, Bauchi Kaduna and Kwara states from outbreaks.

After analyses, 56.25% were serotype O, 18.75% SAT-2, 12.5% Serotype A and 6.25% SAT-1

900 cattle sera samples were analyzed, of which 511 were positive for NSP 3ABC ELISA test and 389 were negative.

90 of the NSP positive samples by ELISA were serotyped. 76 were positive for serotype O, 64 were positive for serotype A and 55 were positive for SAT-2

Furthermore, 738 sera samples from swine population were screened for FMDV antibody using 3ABC FMD ELISA, out of which 12 were positive and 726 were negative.

Distribution of FMDV serotypes analysed at FMD Lab. NVRI, 2014

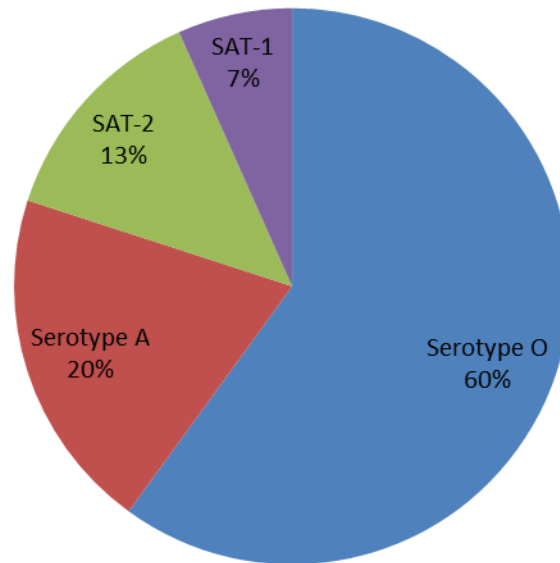


Fig 3: FMDV Serotypes Analysed in NVRI Vom in 2014

Newcastle Disease Virus (NDVI2) Section

The Section has the mandate to research and develop biological serum and vaccine against Newcastle disease virus and Para Influenza type 3

Significant progress has been made concerning NDVI₂ vaccine development under CARGS project research activities in the section.

NDVI₂ was incorporated into binders. Furthermore, NDVI₂ with binders were incorporated into feed and pelleting as well as the assessment of the virus titre in the food pellet was carried out.

Table 31: Egg Collection, EID₅₀ Tests and Results

Date(2014)	No of eggs collected	No of eggs inoculated	EID ₅₀ titre	Vol. of Harvest (l)	Vacc. Batch	
					Pre	Post
August	410	230	2 ^{8.5}	3.0	2 ^{2.8}	2 ^{4.0}
	400	209	2 ^{7.0}	3.2		
September	900	495	-	5.7	2 ^{2.33}	2 ^{4.5}
October	500	310	-	3.1	2 ^{1.4}	2 ^{2.9}
Total	2210	1244				

Table 32: NDV Pelleted Vaccine Test with date and location

Location	No of birds	Date of Pre-Vacc. Bleeding	Date of Post-Vacc. Bleeding
Ngohong	130	8/10/14	22/10/14
Chaha	72	9/10/14	23/10/14
Du	57	7/10/14	21/10/14

NB:

The Section is yet to test the pre-and post-vaccination sera. The section also tried to vaccinate the birds earlier giving NDV-pelleted vaccines to help protect the birds.

Table 33: IBDV Vaccination Dates, Location and Number of Birds

Date	Location	No of Birds	Post IBDV Serum Test Titre
29/10/14	Du	57	-
30/10/14	Ngohong	130	-
31/10/14	Chaha	72	-

NB:

The IBDV – post antiserum test is yet to be tested.

VIRAL VACCINES PRODUCTION

Introduction

The Division continued in her primary responsibility of producing vaccines for prevention of livestock and poultry viral diseases of economic and/or public health importance in Nigeria and other West African countries.

In addition, the Division produces distilled water and cell cultures for use of other Divisions in the institute. Also, the freeze drying and labeling Sections render services to other Divisions involved in the production of lyophilized vaccines and other biological.

In line with this mandate, the Division is responsible for the production of the veterinary viral vaccines. The vaccines are; IBDV (Gumboro) vaccine, Fowl Pox vaccine, Newcastle disease vaccine (La Sota), Newcastle disease vaccine (Intra-ocular) and Newcastle disease vaccine (Komarov). Others are, Newcastle disease vaccine (NDV I-2), PPR vaccine and Rabies vaccine for dogs.

Production:

Production activities were not without challenges during the course of the year. Yet, the Division produced millions of doses of the various veterinary viral vaccines to meet up with market demands. The details of vaccine production for the year are given in Tables 34 & 35 (below)

The Division produced 2,500 bottles (100ml) of sterile distilled water for the International Committee of the Red Cross (ICRC) and about 4,000 litres of distilled water for use in various divisions of the Institute and the two colleges. Also, Cell culture and IBDV sections prepared and gave out various cell cultures in monolayer and suspension including Chicken Embryo Fibroblast (CEF), Vero R133, MNA, IBRS, ZZR 2 and BHK-21 for research as well as vaccine quality assurance tests.

Achievements:

- Installation of two new Astell Autoclaves to augment the two existing Touchclaves, these have enhanced sterilization.
- Preliminary phase of installation of BOC Edwards freeze dryer.
- The faulty condenser of the GT-40(1) Freeze machine was resuscitated and has since been functional.

Table 34: Vaccines Production Figures (vials) in 2014

MONTH	ARV	IBDV	FPV	NDV- K	NDV- L	NDV- i/o	NDV- I₂	PPRV	TOTAL
January	5,720	15,702	0	0	16,163	0	6,144	14,924	58,653
February	0	16,997 *11,800	4,278 *3,730	8,258	15,608	0	0	9,221	54,362
March	8,187	16,192	*5,498	0	8,557	0	17,782	0	50,718
April	0	20,786 *9,842	0	0	17,016	6,109	0	*8,851	43,911
May	8,169	8,291	9,673	4,612	8,311 *4,224	*6,928	7,642	0	46,698
June	0	0	4,464	4,790	8,824	4,259	0	0	22,337
July	4,985	11,079	0	4,443	16,430	0	0	15,204	52,141
August	0	31,402	9,187	19,843	31,385	0	0	0	91,817
Sept	0	8,503	0	13,152	22,294	0	0	0	43,949
Oct	4,805	0	0	4,901	3,889	0	0	4,761	18,356
Nov	0	5,933	0	0	0	4,969	6,069	0	16,971
Dec	0	5,686	3,561	0	9,839	0	12,600	0	31,686
Total	31,866	140,571	31,163	59,999	158,316	15,337	50,237	44,110	531,599

*These figures represents batches of vaccines produced but did not pass quality assessment and were not issued for field use and are not included in the totals.

Table 35: Vaccines Production Figure (doses) in 2014

MONTH	ARV	IBDV	FPV	NDV-K	NDV-L	NDV- i/o	NDV- I ₂	PPRV	TOTAL
Jan	5,720	3,140,400	0	0	3,232,600	0	307,200	746,200	7,432,120
Feb	0	3,399,400 *2,360,000	855,600 *746,000	1,651,600	3,121,600	0	0	461,050	9,489,250
March	8,187	3,238,400	*1,099,600	0	1,711,400	0	889,100	0	5,847,087
April	0	4,157,200 *1,968,400	0	0	3,403,200	1,221,800	0	*442,550	8,782,200
May	8,169	1,658,200	1,934,600	922,400	1,662,200 *844,800	*1,385,600	382,100	0	6,67,6695
June	0	0	892,800	958,000	1,764,800	851,800	0	0	4,467,400
July	4,985	2,215,800	0	888,600	3,286,000	0	0	760,200	7,155,585
August	0	6,280,400	1,837,400	3,968,600	6,277,000	0	0	0	18,363,400
Sept	0	1,700,600	0	2,630,400	4,458,800	0	0	0	8,789,800
Oct	4,805	0	0	980,200	777,800	0	0	238,050	2,000,855
Nov	0	1,186,600	0	0	0	993,800	303,450	0	2,483,850
Dec	0	1,137,200	712,200	0	1,967,800	0	630,000	0	4,447,200
Total	31,866	28,114,200	6,232,600	11,999,800	31,663,200	3,067,400	2,511,850	2,205,500	79,258,747

*These figures represents batches of vaccines produced but could not pass quality assessment and were not issued for field use and are not included in the totals.

Challenges

1. Unavailability of potent Master seed viruses to enhance quality of vaccines produced in the division
2. Frequent power fluctuations leading to the breakdown of some equipment notably the two digital autoclaves which critically affected vaccine production.
3. Inability of the Institute's generators to power critical machines in the division has adversely affected vaccine production

4. Incessant break down of the freeze dryer, which sometimes result in spoilage and wastages
5. Inadequate storage facilities for wet vaccines in terms of containers and ultra low temperature freezers
6. Inadequate supply of water to the division and faulty water distillers.

OTHER REPORTS

Journal Publications by Staff

Ducrotoy, M. J., Bertu, W. J., Ocholi, R. A., Gusi, A. M., Bryssinckx, W., Welburn, S., Moriyon, I (2014) Brucellosis as an emerging threat in developing economies: Lessons from Nigeria. *PLOS Neglected Tropical Diseases*, Vol 8, Issue 7:1-18

Kamani, J; J.P. Yidawi; E.Onovoh; S. Mohammed; D. A. Pam; J. S. Awulu; A. Fernández Sala (2014). In vitro comparative acaricidal efficacy of azadirachtin A and amitraz on *Rhipicephalus (Boophilus) decoloratus* larvae, *Nigerian Veterinary Journal* 35 (2) 975-980

Bertu, W. J., Ocholi, R. A., Kwaga, J. K. P., Kabir, J., Gusi, A. M., Mariyon, I (2014) Isolation of *Brucella abortus* biotype 3 in cattle in Nigeria. *Proceedings of the Annual Congress of Nigerian Veterinary Medical Association (NVMA) held at Musa Yar'Adua Indoor Sport Centre, Murtala Mohammed Square, Kaduna on 23rd – 28th November, 2014.*

SEMINARS PRESENTED IN THE INSTITUTE IN 2014

1. Effect of *Euphorbia hirta* and *Acalypha wilkesiana* decoctions in albino rats and BHK-21 cell line – **Africa Education Initiative (NEF/NVRI 2014 Interns)**
2. Ebola virus disease in animals and man – **CA Meseke**
3. Detection of cadmium (Cd) residue in kidney and liver of slaughtered cattle in Sokoto Central Abattoir, Sokoto state, Nigeria – **B Akawu**
4. Prevalence of animal Trypanosomiasis in some parts of Central Senatorial Zone of Plateau State, Nigeria - **JG Peter**
5. Pathology of *Salmonella enterica* serovar Gallinarum in Japanese quail (*Coturnix coturnix japonica*) - **IJ Barde**
6. Isolation and antimicrobial susceptibility of *Salmonella Gallinarum* in day old broiler chicks obtained from some hatcheries around Jos, Plateau state – **M Gyang**
7. Metagenomic profile of the viral communities in raw and treated water in Jos and environs – **PD Luka**
8. Multi walled carbon nanotubes induce oxidative stress and damage to hepatocytes and spermatocytes in male Wistar rats – **GE Forcados**
9. Dog ecology, dog bite cases and molecular characterization of rabies virus in slaughtered dogs in Niger state, Nigeria – **A Garba**
10. Prevalence of rabies antigen in apparently healthy dogs slaughtered for human consumption in Plateau state – **L Konzing**
11. Serological evidence of Duvenhage virus antibodies in bats and rabies virus antibodies in humans in Niger state, Nigeria – **A Garba**
12. A comparison of lateral flow technique and haemagglutination inhibition test in the detection of Newcastle disease antibodies in commercial poultry in Jos South local government area, Plateau state – **ML Oluwadare**

MAJOR ACTIVITIES HELD IN THE INSTITUTE IN 2014

Table 36: Visit of Dignitaries, Organizations and Institutions to NVRI in 2014

S/No	Date of Visit	Dignitaries, Organizations, Institutions	Name of Team Leader	Purpose of Visit
1.	10/2/2014	Honourable Minister of Agriculture	Dr. Akinwumi Adesina	Courtesy call
2.	14/2/2014	Sec. No. 36 NIPSS Participants		Courtesy call
3.	6/3/2014	University of Jos and West African Innovation and Management Association		Courtesy call
4.	10/4/2014	Commander Special Task Force (JTF)	Major General D. D. Enetie	Courtesy call
5.	10/4/2014	Examination Board, Veterinary Council of Nigeria (VCN)		Courtesy call
6.	9/7/2014	ANAN President	Sikirudeen Tunji Labode	Courtesy call
7.	15/7/2014	Comptroller of Prison, Plateau State Command	Mr. Martins Apebende	Courtesy call
8.	27/8/2014	Commissioner of Police, Plateau State Command	Nasiru Oki	Courtesy call
9.	14/10/2014	Canadian High Commissioner	Mr. Perry Calderwood	Courtesy call and visit of the new BSL-3 Lab.

SPECIAL EVENTS THAT TOOK PLACE IN 2014

- ❖ Visit of the Honorable Minister of Agricultural to NVRI Vom, on February 10, 2014
- ❖ Youth Corpers Present a Nigeria Flag to EDVR – February 12, 2014
- ❖ NIPSS Participants', SEC 36 visit to NVRI, February 14, 2014
- ❖ Executive Director inaugurates NVRI constituted Committees – Feb 17, 2014)
- ❖ Seminar-workshop on pre retirement for some staff of NVRI, Vom 27th-28th February 2014
- ❖ Condolence visit to family of late Dagwom Vwang, March 14, 2014
- ❖ Matriculation of federal college of animal health and production technology and federal college of medical laboratory, Vom on April 3, 2014
- ❖ Executive director NVRI Vom, Dr. M. S. Ahmed on his Investiture as Road Marshal - April 4, 2014
- ❖ The Commander of the JTF Special Task Force visited the Institute on 9th April, 2014
- ❖ Certificate of commendation to EDVR by Conference of Civil Society Organization for Peace and Development - May 2, 2014
- ❖ Visit by the Veterinary Council of Nigeria (VCN) to the Institute on May 8, 2014
- ❖ Opening ceremony of the 2014 NEF-NVRI Toxicology Internship Programme held at A. G. Lamorde on 10th June, 2014
- ❖ Visit of Medical Lab MBTE to NVRI, Vom – June 16, 2014
- ❖ Visit of the Anan president Alhaji Sakirudeen C. L. To the institute 9th July, 2014
- ❖ Visit of the Controller of Prisons Plateau State Command, Mr. Martins U. A. To the institute on 15th July, 2014
- ❖ NVRI/NEF toxicology Internship Programme 2014, closing ceremony, August 21, 2014
- ❖ Visit of CP plateau state command, held on august, 27th 2014
- ❖ Seminar on Ebola virus 26th august, 2014
- ❖ Livestock vaccine and vaccination (training) 21-22nd October, 2014 at QC conference room
- ❖ A Committee of the Veterinary Council of Nigeria, paid courtesy call to NVRI, Vom - November 3, 2014
- ❖ OIE twinning pre sampling workshop CODA-CERVA at NVRI 4th to 12th November 2014

Table 37: List of Staff that Retired from Service in 2014

S/No.	NAME	DESIGNATION	GRADE LEVEL	DATE OF DISCHARGE	REASON
1.	Mrs. Jibril Aishatu	Asst. Executive Officer I	6	16/01/2014	Retirement
2.	Mrs. Ukoha Chukwu O.	Chief Med. Lab. Scientist	3	09/07/2014	Retirement
3.	Mrs. Ameh Larai	Head Lab Attendant	3	20/09/2014	Retirement
4.	Mrs. Karaye Lanti Joy	Asst. Chief Education Officer	12	27/09/2014	Retirement
5.	Mrs. Dalyop Chundung	Head Lab Attendant	3	28/09/2014	Retirement
6.	Mr. Ogah John Odo	Chief Med. Lab. Assistant	3	28/09/2014	Retirement
7.	Mrs. Olaleye Sarah	Senior Med. Lab. Technician	8	28/09/2014	Retirement
8.	Mr. Boss Simon Sllas	Principal Environmental Health Officer	9	11/10/2014	Retirement
9.	Mr. Augustine Abinya	Agric Field Attendant	3	03/10/2014	Retirement
10.	Mr. Dung Dalyop	Livestock Attendant	3	22/10/2014	Retirement
11.	Mr. Turu Malanga	Agric Field Attendant	3	02/10/2014	Retirement
12.	Mr. Gabriel Kumbet P.	Chief Technical Officer		02/10/2014	Retirement
13.	Mrs. Anita Lawal M.	Chief Med. Lab. Assistant	6	04/10/2014	Retirement
14.	Mr. Bossan John Luka	Chief Printing Assistant	6	30/03/2014	Retirement
15.	Mrs. Wapmuk Elizabeth	Director (Admin & Supply)	15	08/08/2014	Retirement
16.	Mr. Dapiya Goddy	Head Lab Attendant	3	05/07/2014	Retirement

Table 38: List of Staff Who Transferred Their Service in 2014

S/No.	NAME	DESIGNATION	GRADE LEVEL	DATE OF DISCHARGE	REASON
1.	Dr. Ahmed Abdullahi	Assistant Director	CONMESS 6	21/01/2014	Transferred from NVRI to Usmanu Danfodiyo University, Sokoto
2.	Mr. Bot David Yakubu	Assist. Chief Medical Lab. Scientist	CONHESS 12	01/08/2014	Transferred from NVRI to University of Jos
3.	Dr. Dogo Goni Iliya	Chief Vet. Res. Officer	CONMESS 5	01/06/2014	Transferred from NVRI to University of Jos
4.	Mrs. Ngoyo Falmata	Senior Confidential Secretary	8	12/02/2014	Transferred from Lake Chad Basin Authority to NVRI
5.	Mrs. Bassi Hauwa Amos	Chief Accountant	13	05/11/2014	Transferred from Lake Chad Basin Authority to NVRI
6.	Mr. Jacob Ubgede	Statistician	8	11/08/2014	Nigerian Institute for Oceanography and Marine Research Victoria Island Lagos to NVRI

Table 38: List of Staff Who Transferred Their Service in 2014

S/No.	NAME	DESIGNATION	GRADE LEVEL	DATE OF DISCHARGE	REASON
1.	Dr. Ahmed Abdullahi	Assistant Director	CONMESS 6	21/01/2014	Transferred from NVRI to Usmanu Danfodiyo University, Sokoto
2.	Mr. Bot David Yakubu	Assist. Chief Medical Lab. Scientist	CONHESS 12	01/08/2014	Transferred from NVRI to University of Jos
3.	Dr. Dogo Goni Iliya	Chief Vet. Res. Officer	CONMESS 5	01/06/2014	Transferred from NVRI to University of Jos
4.	Mrs. Ngoyo Falmata	Senior Confidential Secretary	8	12/02/2014	Transferred from Lake Chad Basin Authority to NVRI
5.	Mrs. Bassi Hauwa Amos	Chief Accountant	13	05/11/2014	Transferred from Lake Chad Basin Authority to NVRI
6.	Mr. Jacob Ubgede	Statistician	8	11/08/2014	Nigerian Institute for Oceanography and Marine Research Victoria Island Lagos to NVRI

Table 39: List of Staff Deceased in 2014

S/No.	Name	Designation	Grade Level	Date of Discharge	Reason
1.	Mrs. Kumbish Comfort P.	Principal Livestock Superintendent II	09	21/02/2014	Deceased
2.	Mrs. Assam Helen Henry	Secretarial Assistant	5	29/02/2014	Deceased
3.	Mr. Omole Olayiwola A.	Princ. Med. Lab. Assistant	11	12/01/2014	Deceased
4.	Miss Mancha Chundung	Clerical Officer I	4	19/04/2014	Deceased
5.	Dr. Onyeama Henry P.	Assistant Director	6	26/07/2014	Deceased
6.	Mrs. Ekundayo Sarah	Chief Med. Lab. Scientist	13	11/10/2014	Deceased
7.	Mr. Musa Sunday Adam	Chief Store Keeper	6	21/10/2014	Deceased

Table 40: List of Staff Who Resigned in 2014

S/No.	Name	Designation	Grade Level	Date of Discharge	Reason
1.	Dr. Galadima Makchit	Senior Vet. Res. Officer	02	28/02/2014	Resignation
2.	Mr. J. P. Kaigama	Chief Printing Officer	13	01/11/2014	Resignation

Table 41: List of Staff Employed in 2014

S/No.	Name	Designation	Grade Level	Date of Employment	Remark
1.	Mr. Audu Albert	Agric Field Attendant	02	28/02/2014	Appointment

Table 42: List of Staff Who Withdrew Their Services in 2014

S/No.	Name	Designation	Grade Level	Date of Discharge	Reason
1.	Dr. Dawurung Christiana	Principal Vet. Res. Officer	CONMESS 03	01/5/2014	Withdrawal

Table 43: List of Staff on Leave of Absence and Secondment in 2014

NO.	Name	Designation	Grade Level	Date of Discharge	Reason
1.	Dr. Hussaini Bakari Ado	Principal Vet. Res. Officer	CONMESS 11	01/03/2014	Secondment
2.	Mr. Nanbol Listick D.	Principal Med. Lab. Scientist	CONHESS 11	03/02/2014	Leave of Absence
3.	Dr. (Mrs.) Ezeala Lily O.	Chief Librarian	CONRAISS 12	11/07/2014	Secondment
4.	Dr. AkalusiYewande	Chief Vet. Res. Officer	CONMESS 5	31/08/2014	Leave of Absence
5.	Mrs. Makinde Idowu O.	Principal Med. Lab. Scientist	CONHESS 9	26/09/2014	Secondment
6.	Mrs. Okeke Lilian A.	Principal Med. Lab. Scientist	CONHESS 9	01/11/2014	Secondment
7.	Mr Salisu Musa	Principal Lab Science Technician	CONHESS		Leave of Absence

Table 44: List of Staff who completed in-Service Training in 2014

S/N	Name	Course of Study	Date Commenced Study	Date of Completion
1	Dr. Akanbi Olatunde Babatunde	PhD Veterinary Pathology	2/21/2008	2/22/2014
2	Miss. Nwogbo Ifeoma	PhD Virology	3/26/2010	11/3/2014
3	Engr. Shok Dauda	MSc. Construction Material	7/13/2011	12/30/2014
4	Mr. TTT Pwajok	MSc. Public Administration	8/10/2011	4/14/2014
5	Mr. Adamu Bello	MSc. Animal Production	1/20/2012	7/21/2014
6	Mr. Ogbonah Chimezie	MSc. Medical Microbiology	2/2/2012	7/21/2014
7	Mr. Tobias Choji	MSc. Histopathology	2/2/2012	10/8/2014
8	Miss. Sarah Walbe	MSc. Public Administration	3/1/2012	5/4/2014
9	Mr. Cyril Mafai	MSc. Sociology	3/19/2012	10/31/2014
10	Mr. Focados Gilead	MSc. Biochemistry	3/23/2012	5/25/2014
11	Dr. Agang Ishaya	MSc. Avian Medicine	3/25/2012	9/27/2014
12	Mrs. Idowu Makinde	MSc. NFELTP	4/30/2012	8/18/2014
13	Mr. Olawuyi Kayode Abraham	MSc. NFELTP	4/30/2012	9/1/2014
14	Mr. Ardo Abdullahi	MSc. Animal Production	7/12/2012	7/14/2014
15	Mr. Pam Mark Di	ND Mechanical Engineering	10/22/2012	12/24/2014
16	Mr. Samme Andrew	MSc. Public Administration	12/15/2012	12/16/2014

Table 45: List of Staff Approved for Training in 2014

S/NO.	NAME	RANK	DIVISION	COURSE OF STUDY	INSTITUTION	DURATION	NATURE OF TRAINING	DATE OF COMMT.	DATE RESUMED
1	Dr. Wungak Yiltawe S.	Prin. Vet. Res. Officer	Viral Research	PhD Vet. Epid.	University of Ibadan	5 years	Part Time	3/9/2012	3/10/2017
2	Mr. Chollom Solomon	Prin. Med. Lab. Scientist	Viral Research	PhD Microbiol.	University of Jos	5 years	Part Time	9/9/2012	9/10/2017
3	Dr. Dauda Bwala	Prin. Vet. Res. Officer	Viral Research	PhD Virology	University of Pretoria	3 years	Full Time	2013	2016
4	Dr. Luka Pam Dachung	Prin. Vet. Res. Officer	Research	PhD Virology	Makerere University Kampala, Uganda	5 years	Part Time	5/22/2013	5/23/2018
5	Dr. Olado kun Agnes .T.	Prin. Vet. Res. Officer	Production	PhD Zoology	University of Pretoria	4 years	Full Time	6/15/2014	6/16/2018
6	Miss Yusuf Hajara A.	Prin. Res. Officer	Biochem.	PhD Biochem.	Bayero University Kano	5 years	Part Time	7/25/2014	7/26/2019
7	Dr. Adamu Susan Samira	Snr. Vet. Res. Officer	Viral Research	PhD Climate Change	University of Glasgow, Scotland	3 years	Full Time	8/29/2014	8/30/2017
8	Dr. Odita Christian a Ibironke	Prin. Vet. Res. Officer	Diagnostic	PhD Public Health	Walden University (Online Programme)	5 years	Part Time	9/2/2014	9/3/2019
9	Dr. Audu Benshak J.	Prin. Vet. Res. Officer	Applied Biotech.	PhD Medical Microbiol.	University of Aberdeen, UK	3 years	Full Time	1/5/2015	1/6/2018
10	Alu Folake A.	Prin. Exec. Officer (Accts)	NVRI Ibadan	MSc Business Admin	Ladoke Akintola University of Tech. Ogbomoso	18 Months	Part-Time	5/17/2013	11/18/2014
11	Ola Benson Benjamin	Senior Computer Graphic Artist	Printing Press	MSc.MFA	University of Nigeria	2 years	Full Time	27/11/2013	28/11/2015
12	Ibeme-Awoloh Oluchi	Research Officer I	Applied Biotech.	MSc. Biology	University of Port Harcourt	2 years	Full-Time	20/1/2014	21/1/2016
13	Mohammed Samaila J.	Med Lab Scientist I	Parasitology	MSc. Microbiol.	A.T.B.U. Bauchi	2 years	Full-Time	5/8/2014	5/8/2016
14	Gullek J. Godfrey	Med. Lab. Scientist	Parasitology	MSc. Microbiol.	University of Agric. Makurdi	2 years	Full-Time	18/5/2014	19/5/2016
15	Egwu Okoh	Senior Vet. Res. Officer	Parasitology	MSc. Vet. Epid.	Ahmadu Bello University, Zaria	2 years	Full-Time	30/6/2014	1/7/2016

16	Gyang Dachung Davou	Snr. Programme Analyst	Finance & Accounts	MSc Info Tech.	National Open University of Nigeria (Jos Study Center)	1 year	Part-Time	7/12/2014	7/13/2015
17	Mukailla Fatima Bako	Prin. Med. Lab. Scientist	Quality Control	MSc. Microbiol.	A.T.B.U. Bauchi	2 years	Full-Time	31/7/2014	1/8/2016
18	Mahan David Ezekiel	Snr. Librarian	Library	MSc. Library	University of Ibadan	2 years	Full-Time	8/26/2014	8/27/2016
19	Payi Elizabeth Timothy	Chief Tech. Officer	Dagwom Farm	MSc. Anim Prod. & Health	A.T.B.U. Bauchi	2 years	Full-Time	Sep-2014	Sep-2016
20	Bawul Joseph Lakwoe	Asst. Director Admin.	Admin	MSc. Public Admin	National Open University of Nigeria (Jos Study Center)	2 years	Full-Time	9/10/2014	9/11/2016
21	Onoja Oga	Chief Med. Lab. Scientist	Quality Control	MSc. Life Science	North Western University, Muttenz, Switzerland	2 years	Full-Time	9/15/2014	9/15/2016
22	Ajayi Olawunmi T.	Principal Med. Lab. Scientist	Bacterial Research	MPH	University of Ibadan	2 years	Full Time	10/3/2014	11/3/2016
23	Shinmuk Patrick Buba	Technical Officer	Dagwom Farm	HND Man. Engineering	Plateau State Polytech.	2 years	Full Time	10/1/2014	11/1/2016
24	Jilong Bilhatu P.	Confidential Secretary	Printing Press	HND Office Tech. Mgt.	Plateau State Polytech	2 years	Full Time	20/1/2014	21/1/2016
25	Mwadkon Pwajok B.	Chief Livestock Overseer	Poultry	HND Anim Prod.	FCAH&PT, Vom	2 years	Full Time	10/20/2014	10/21/2016
26	Gyang Yakubu Davou	Livestock Superint.	Poultry	HND Anim Prod.	FCAH&PT, Vom	2 years	Full Time	10/20/2014	10/21/2016
27	Pam Joseph	Senior Foreman	Workshop	ND Civil Engr.	Plateau State Polytech	2 years	Full Time	3/27/2014	3/28/2016
28	Dodo Elizabeth	Senior Library Asst.	Library	ND Library	Plateau State Poly	2 years	Full Time	3/27/2014	3/28/2016
29	Dalyop Angelina	Snr. Med. Lab. Assistant	Diagnostic	ND Sci. Lab. Tech.	FCAH&PT, Vom	2 years	Full Time	10/20/2014	10/21/2016
30	Dalyop Pam	Agric Field Attendant I	Workshop	ND Agric. Tech.	Fed. College of Land Resources Tech., Kuru	2 years	Full Time	11/5/2013	11/6/2015
31	Nanzing Tanko Lar	Livestock Attendant	Poultry	ND Anim. Hlth & Prod. Tech.	FCAH&PT, Vom	2 years	Full time	9/12/2013	10/12/2015
32	Gyang Timothy C.	Livestock Overseer	Diagnostic	ND Anim. Hlth & Prod. Tech.	FCAH&PT, Vom	2 years	Full time	9/12/2013	10/12/2015

ACKNOWLEDGEMENT

This report was compiled and edited by members of the NVRI Seminar and Publications Committee, comprising:

Dr P. A. Okewole	Chairman
Dr J. Kamani	Member
Dr I. S. Tekki	Member
Dr A. T. Oladokun	Member
Dr W. Bertu	Member
Dr (Mrs.) V. Ifende	Member
Dr O. O. Oladipo	Member
Dr I. J. Barde	Member
Mr. T. Barko	Member
Mr. J. U. Ogbu	Member
Mr. Jerry Musa	Member
Dr (Mrs.) C. I. Oditia	Secretary
Mr. Francis Dama	Assistant Secretary

The 2014 edition of the NVRI Annual Report was made possible by the collaborative efforts of the members of the Publications Committee and the cooperation of the Heads of Divisions who submitted their Divisional reports. These efforts are very much appreciated, even as we look forward to better collaboration and cooperation in future. We hereby also wish to thank very sincerely those who worked behind the scene with valuable contributions.

Dr P. A. Okewole
Chairman, Seminar and Publications Committee

NVRI SATELLITE LABORATORIES

A. ZONAL LABORATORIES

1. ADAMAWA STATE

P.M.B 2046, Kofare
Near Min of Agric. Natural
Resources, Farm Mechanization
Deport, Yola

2. KEBBI STATE

Jega Road,
Balasa LIBC (Silo Office)
Birnin Kebbi

3. CROSS RIVER STATE

C/O Ministry of Agriculture,
No 3 Barracks Road,
Calabar

4. KANO STATE

P.M.B 2001
Near Kundila Housing
Estate, at Kundia Vet Clinic,
UngwanUku Kano-Zaria Road,

5. ONDO STATE

Vet Centre,
Hospital Road,
Near NEPA
Akure
(Express), kano

6. ABIA STATE

P.M.B 2208
Nat. Root Crops Research
Premises,
Umudike-Umuahia

B. STATE LABORATORIES

1. ABUJA F.C.T

Nat Vet Res Inst
FCT Vet Clinic,
Mopol Junction
Nyanya Abuja

P.M.B 6590, Garki

3. AKWA IBOM STATE

P.O.Box 1055,
Etinan-Uyo

5. TARABA STATE

Vet. Investigation Lab
C/O Vet Hospital
P.M.B 1080
Jalingo

7. BAUCHI STATE

Behind NIDB Building
Maiduguri Road, Bauchi
P.M.B 0107 Bauchi
Tel: 077-543052

9. BENUE STATE

M.A.N.R Premises,
P.O.Box 908,
Makurdi

2. BORNO STATE

P.M.B 1553, Opp. NTA
Maiduguri, Near the Post
Office, Maiduguri

4. EDO STATE

Off Benin Sapele Road,
P.M.B 1447,
Benin City

6. ENUGU STATE

P.M.B 002
Oji Leather Tannery (FLD)
Near the Cooperative
Training Institute,
Orji-River

8. KADUNA STATE

P.M.B 2005 Mando Road, Near
ABU College of Agric, Kaduna

10. KATSINA STATE

P.O Box 346 Katsina,
Veterinary Clinic,
Kofar Kwaya.

11. BENUE STATE

M.A.N.R Premises,
P.O.Box 908,
Makurdi

12. KWARA STATE

Along Old Jebba Road,
Opposite Farm Center
P.M.B 1488, Ilorin

13. LAGOS STATE

No.1Keffi Street
P.M.B 12584,
Obalende, Lagos.
Tel-01-687243
01-680345

14. RIVERS STATE

Vet. Investigation Laboratory
Inside ADP Farm Premises,
Along Airport Road,
Rumuodomaya,
Port Harcourt

15. OSUN STATE

Vet. Investigation Lab
P.O Box 253 behind
Irewole LG Sec
Km 40, Ife-Ibadan Road, Ikire

16. NASARAWA STATE

Vet. Investigation Laboratory
Old Nasarawa near Guata
Village Keffi

17. PLATEAU STATE

Montol Road
P.O.Box 111, Shendam

18. SOKOTO STATE

P.O Box 801
Tel: 060-231092
Moyijo Road, Opp. Kwanni
Police Station,
Near the Central Market,
Sokoto