CURRICULUM VITAE

I.	**Name**	Cyprian Ebong
II.	**Profession**	Animal Nutritionist
III.	**Date of Birth**	5th June 1955
IV.	**Nationality**	Ugandan
V.	**Key Qualifications for the Tasks**	
A.	**Language proficiency**	Mother Tongue: Luo (Lango dialect) Acquired Languages: English (Very good) French (Very low) Swahili (Moderate)

B. **Professional and strategic undertakings**

Dr. Ebong has been working in Animal Production Research for over 26 years to date. During these years he has been involved in applied and systems research in livestock production; particularly crop-livestock integration. He rose progressively through the ranks of research management as detailed below; and mentored a number of young scientists in Uganda and Rwanda with whom he coauthored a number of publications and wrote award-winning proposals in competitive grant projects across commodities and disciplines in agricultural research for development. One such project was the SIDA funded project on**: *Improving beef cattle productivity for enhanced food security and efficient utilization of natural resources in the lake victoria basin***. Part of the project involved ***evaluation of straw-based total mixed rations for the feedlot beef production in Rwanda-*** a MSc dissertation submitted to College of Agriculture and Environmental Sciences (CAES), Makerere University. In retrospect, Cyprian was a key person in the beef sector development – a government initiative intended to promote feedlot beef production targeting export markets through public-private sector partnership.

He offered part time lecture to undergraduate and postgraduates at the university; alongside supervision of both research programs for the award of MSc and PhD degrees of Makerere University, University of Nairobi; University of KwaZulu Natal.

VI. Education

1. Ph.D. in Animal Nutrition from the University of Aberdeen (1985 – 1989)
2. M.Sc. in Animal Nutrition at the University of Aberdeen Scotland (1984 – 1985)
3. B.Sc. (Agriculture) Makerere University (1974 – 1978)

4. Certificate in Systems Research Methodology from the International Center for Development Oriented Research in Agriculture (ICRA) at Wageningen – The Netherlands (1991).
5. Certificate in Management of Agricultural Research (Oakland) USA July – August 1993

VII Thesis Publications:

1. Ebong, C. (1985). Effects of season on appetite cycle, feed and water intake, digestibility and rumen retention time in soya sheep. *Master of Science Thesis submitted in partial fulfillment of Master Degree course of the University of Aberdeen.*

2. Ebong, C. (1988). The effects of proanthocynanidins in sorghum straws and browse on energy and nitrogen metabolism in sheep and goats fed teff straw. *PhD. Thesis University of Aberdeen*

VIII Other publications

1. **Ebong C, 1995**. *Acacia nilotica, Acacia seyal*, and *Sesbania sesban* as supplements to tef (*Eragrostis tef*) straw fed o sheep and goats. *Small Ruminant Research 18:233-238.*

2. **Ebong C**., Y. K Baguma, P. Lusembo, J. Kigongo.1995. Forage value of cassava foliage: effects of spacing and cutting intervals on yields. *Proceeding: 6th Symposium ISTRC-AB pp 400-401*

3. A. J. A. Essers. **C. Ebong**. R. M. van der Grift. M. J. R. Nout. W. Otim-Nape and H. Rosling. 1995. Reducing cassava toxicity by heap fermentation in Uganda. *Journal of Nutrition 128 – 136.*

4. **C. Ebong**., G. S. Byenkya., J. Ndikumana., 1999. Effects of substituting Calliandra leaf meal for Soybena meal on intake, digestibility growth and feed efficiency in goats. *Journal of Applied Animal Research.*

5. Kabirizi, J. M., Bareeba, F. B., Sabiiti, E. N., **Ebong, C**., Namagemebe, A., Kigongo, J. 2000. Effects of supplementing crossbred lactating cows fed elephant grass based diets with lablab hay and a concentrate. *Uganda Journal of Agricultural Sciences 5: 9 – 15.*

6. Lusembo, P., **Ebong C,** and E. N. Sabiiti, 2000. Towards sustainable seed production of center in Uganda. *Uganda Journal of Agricultural Sciences. 3:18-23.*

7. Lusembo, P., **Ebong C,** and E. N. Sabiiti. 1999. Integration of cassava tuber and forage legume seed production for sustained soil fertility. *Tropical Agriculture.* 75: 18 – 20.

8. **Ebong C**, Mbuza M. 1996. Livestock Development: Policy Issues and Concepts. In: Small Ruminant CRSP: *Proceedings of east African livestock Assessments Workshop held at Entebbe, Uganda (January 29 – 1 February 2001).*

9. Kato, H., Bareeba, F.B., **Ebong, C**., and Sabiiti E.N. 2004. Fermentation characteristics and nutrient composition of browse ensiled with maize fodder. *African Crop Science Journal* 12 (4): 393-400

10. Kato, H., Bareeba, F.B., **Ebong C,** Sabiiti, E.N 2006 Ensiling characteristics and milk producing capacity of browse/maize forage mixture. *Livestock Research for Rural Development. Volume 18 Artcile #85*

11. Ebong, C., Ejobi,F., Kabasa, J.D., Oloya, J., Kabirizi, J., Isabirye, P. and R. Livingston. 2007. Methane emission from the cattle population in Uganda. *Journal Animal and Veterinarry Advances* 6 (3) 399-403.

12. Manzi M, Owino JJ, **Ebong C**, Mosi RO**.** 2011. Factors affecting pre- and post-weaning growth of six cattle breed groups at Songa Research Station in Rwanda. *Livestock Research for Rural Development* 24(4) 2012.

13. Katongole C B, Mpairwe D, Bareeba F B, Mukasa-Mugerwa E **Ebong C**. 2013. Predicting body weight from heart girth, height at withers and body condition score in *Bos indicus* cattle bulls of Uganda2013. *Livestock Research for Rural Development. Volume 25, Article #46*

14. Mupenzi, M. Myambi C.B, Gahunga, P. Mugheni D,M. Laswia G.H, Kimambo A.E, , **Ebong . 2013.** The use cattle abattoir waste and sources of inoculums for feed

evaluation using *in-vitro* gas technique. Manuscript No AN 1264R under review publication in *Agricultural Journal* 8(4): 173-180

15. Niyireba T.N, **Ebong C,** Agili S, Low J, Lukuyu B, Kirui J, Ndirigwe J, Uwimana G, Kakundiye L, Mutimura M, Gahakwa D, Gachuiri C.K. 2013. Evaluation of Dual Purpose Sweet Potato [*Ipomea batatas* (L.) Lam] Cultivars for Root and Fodder Production in Eastern Province, Rwanda**.** *Agricultural Journal* 8(5): 242-247

16. Niyireba R.T, **Ebong C**, Lukuyu B, Agili S, Low J, Gachuiri C.K.2013. Effects of Location, Genotype and Ratooning on Chemical Composition of Sweetpotato [*Ipomea batatas* (L.) Lam] Vines and Quality Attributes of the Roots. *Agricultural Journal* 8 (6): 315-321

17. Ndyambaje B, Mushonga B, **Ebong C**. 2013. Performance Characteristics of Lactating Ankole and Ankole x Friesian Upgrades Under Open Grazing Systems in Nyagatare District, Rwanda. *Journal of Animal and Veterinary Advances* 12 (15): 1263-1265

18. Mutimura M, Dusengemungu L, Musana B, Gahakwa D. **Ebong C**.2014. Household characteristics and livelihood strategies for beef enterprise development in Eastern Province of Rwanda. *Journal of Animal and Veterinary Advances* 13 (10): 644-651

19. Mutimura M., **Ebong C.,** Rao I.M., Nsahlai I.V. 2015. Nutritional evaluation of available feed ruminant feed resources in smallholder dairy farms in Rwanda. *Tropical Animal Health and Production* 47 (4): 1-9.DOI 10.1007/s 11250-0839-y

20. Taabu H.L., Ndyomugenyi E.K., Mutetikka D., **Ebong C**. 2016. Effect of feeding sweet-potato vine based diets as partial milk substitutes for dairy calves in Uganda. *Livestock Research for Rural Development* 28 (2) *Article # 18*

21. Mutimura M., **Ebong C**., Idupulapati M.R, Nshalai I.V. 2016. Changes in growth performance of crossbred (Ankole x Jersey) dairy heifers fed on forage grass diets supplemented with conmmercial concentrates. *Tropical Animal Health and Production* 48 (4): doi 10.1007/s11250-016-1019-4

22. Kashaigili J., Zziwa E., Siwa E., Laswai E., Segatagara B.M., Mpairwe D., Kadigi R.M.J., **Ebong C**., Mugasi S.K., Laswai G.H., Mutimura M., Ngowi P.J., Kadigi I. 2015. Implications of land use cover change and climate variability on futre prospects of beef production in Lake Victoria Basin. *American Journal of Climate Change* 04(05): 461-473.

23. Atuhairwe A.M., Kabi F., Okello S., Mugerwa S., **Ebong C**. 2016. Optimizing bio-physical conditions and pre-treatment options for breaking lignin barriers of maize stover feeds using white rot fungi. *Animal Nutrition* htttp://dx.doi.org/10.1016/j.animu.2016.08.009

24. Lutakome P., Kabi F., Tibayungwa F., Laswai G.H., Kimambo A., Ebong C. 2017. Rumen liquor from slaughtered cattle as inoculum for feed evaluation. *Animal Nutrition* 3: 300-308.

25. Lutakome P., Kabi F., Tibayungwa F., Laswai G H., Kimambo A., Ebong C., Bareeba F.B. 2018. Comparison of rumen liquor from slaughtered and fistulated cattle as sources of inoculum for evaluating nutritional value of ruminant diets. *Animal Nutrition (*in press).

Consultancies and professional assignments

1. **The analysis of the small ruminant systems in Uganda (1996):** This produced two research proposals that were funded by European Union under the auspices of ILRI – Small Ruminant Network (ILRI – SR – NET).

2. **Analysis of the Dairy Sector in Lake Zone of Uganda (1996 and 1998):**This consisted of two surveys that generated information on farmer typology, and in relations to the socio-economic circumstances of dairy farmers in Mukono and Mpigi and Jinja districts of Uganda in collaboration with International Center for Development Oriented Research in Agriculture (ICRA), Wageningen the Netherlands

3. **Diagnosis of Livestock Production Systems in Six districts of Uganda (1998):** The study looked at various components of the livestock production sector in the six districts representing major agro-ecological and farming systems in Uganda. It generated projects that were implemented with the support of DANIDA under the Agricultural Sector Program Support (ASPS) for more than five years and thereafter used as a model for piloting competitive grant scheme in NARO under the NARS arrangement. Dr. Ebong played a key role as trainer, coordinator and facilitator in the analysis of constraints and coordination of projects therefrom. He was also a key researcher in the feed resource development. All these projects were implemented by innovation platforms in an action research approach. Some of the outcomes of the project include: a) thermostable vaccine production and delivery under public-private sector partnership; b) goat improvement that became the springboard for FARM AFRICA (an international NGO) in Mt Elgon slopes of Uganda; c) dry

season feed management technologies that attracted private sector investment in milk processing and marketing in Masaka by Masaka Diocese Development Organization (MADDO). The project has continued to win more funding for implementation under competitive grant scheme under ASARECA, and implemented by the mentees of Dr. Ebong; d) sporadic private sector investments in mini-hatcheries for rural poultry development in the central region; and e) recognition of *Cymbopogon nardus* as an invasive plant species that threatened feed resource base of pastoral systems under the Global Environment Facility (GEF); by the time I left NARO an initiative to transform control of *Cymbogon* control and a youth employment opportunity was muted. The results of the study ultimately resulted into a paper that won the second FARA award under the principal authorship of a young mentee.

4. **Characterization of Livestock Sector in Mbarara and Sembabule in the Context of crisis Mitigation (1991):** This activity was part of Livestock Early Warning Systems Research undertaken with USAID-CRSP support and in collaboration with Texas A &M University (USA). It is a regional research program involving Ethiopia, Kenya, Uganda and Tanzania with the objectives of developing web-based decision support tools to predict impending nutritional stress to ruminant livestock in pastoral and agro-pastoral systems. The key expected outcome was to inform pastoralists of impending forage declines so that they sell their animals before market prices became too low. The study involves historical climate data analysis; plant growth modeling; food security situations; market price analysis (grain and livestock prices) and; coping mechanisms pastoralists used to contain effects of drought. Web-based Early Warning System was developed. Means passing message to farmers became a problem because of weak institutional arrangement. Dr. Ebong was national focal point person; and a member of research team that included two PhD students

5. **Analysis of livestock sector in Lira District (1997):** Lira district consulted us on how analysis the livestock system in the district and develop a working paper for areas of improvement in terms of breeds and management responsive to the market demand for milk meat and draught power. The work covered all species of animals including cattle, ruminants, pigs and poultry. The working document has been used to implement strategies recommended with Dutch Development support (DGIS) as part of support to recovery program under Local Government Support Program (LGP)

6. **Analysis of livestock in the context of deforestration and land use in Ushirombo – Kahama district – Tanzania (1996):** This consultancy was given to me to look at the perceived threat that increased number of cattle was likely to have on the forest

cover in the *miombo* woodlands of Ushirombo (Tanzania); and to identify research and development issues to be handled by Ukiriguru Research Station and Kahama district development program with the support of the Dutch Development Support (DGIS). The study revealed that the *miobo* woodland provided ideal silvi pastoral environment for livestock and the Sukuma agropastoralists understood the importance of the trees to understorey herbage. Deforestation was promoted by gold mining to provide scaffolds; and market incentives for charcoal in emerging towns and cities. To a small extent debarking for native beehives also contributed to deforestation. The woodland was awash with untapped plant biodiversity and indigenous technical knowledge for the control of crop pests and some livestock diseases-virgin areas for research. Farmers produced a lot of food during the rainy season. Much of the grain yield is wasted in feasts and gifts during the dry season. The road linking the region major towns and cities including Rwanda was likely to stimulate market oriented production.

7. **Livestock and Food Security in Musingi Division Lake Zone Tanzania (1991):** This was part of training systems analysis at the International Center for Development Oriented Research in Agriculture (ICRA) in the Netherlands. It was based on an invitation of Ukiriguru Research Station to understand factors contributing to soil fertility and crop yield declines in the region. The study identified overstocking and overgrazing, nature of the soil as the key components of vicious cycle of poverty. Sporadic migration to uninhabited areas was a coping mechanism and notoriety for the Basukuma people. Opportunity to access marshalands for **rice** production was a key exit strategy from poverty and wealth accumulation in term of livestock. Irrigated vegetable production and marketing was an emerging opportunity for the youth but massive use of pesticides and fungicides was a latent public health concern.

8. **Analysis of the farming system in Kyela district (1993):** Study looked at the whole system in the context land pressure. Dr. Ebong's role was to look at the interplay between crop and livestock and suggest ways for improvement in terms of breed and management options that is responsive to the market. The study revealed that indeed land pressure was a problem and animal lost weight in the cropping seasons. Premium rice (the Kyela **rice**) has had an established market linkages and a major source of income for the people. Cocoa and oil palm were cash crops but less active than the **rice** value chains. Local prices for milk and meat were high. Oil palm cake and **rice** straws were opportunities for mitigating feed shortage and tapped into the meat and milk market opportunities.

9. **Based survey for the development of cattle methane reduction project (2000):** This study covered 14 districts representing the various production and management systems in Uganda and a draft report written. The study looked at the implications of increasing human population on cattle methane emission into the atmosphere. Data was collected on various production characteristics including lactation yields, lactation length, calving intervals, age at first calving, bull to cow ratios, contribution to draught power, mortality rates, off-take rates. These were done across existing breeds in Uganda. Demand for milk, meat and draught were estimated and projection of expected cattle population and methane emission were developed using EPA model (USA). The Baseline will be used to solicit support of Canada to Uganda in implementing the Clean Development Mechanism component of the Kyoto Protocol.

10. **Strategic Plan for ASARECA Livestock and Fish Program (LFP):** Dr. Ebong was the lead consultant the developed the Strategic Plan for ASARECA LFP (2009-2016). This followed the transformation of ASARECA from networks to programs and transition from project management to innovation platform approach in agriculture for development. Through national and regional (East and Central African region) consultation with stakeholders, the team was able to identified themes and sub-themes for livestock and fisheries research for development in ASARECA. The themes and sub-themes were areas for competitive research call funded under basket funding mechanism TO ASARECA

11. **East African Agriculture Productivity Project (EAAPP): The cassava centre of Excellence:** During my tenure as Deputy Director General (Quality Assurance) in NARO, I conceptualize and championed the development of concept note and proposal for the Cassava Centre of Excellence in the organization. The concept is similar to inclusive business paradigm, because one country takes lead in research responding to regional constraints and opportunities. The product is scale out to other countries in the region through ASARECA. The components of EAAPP include Cassava (Uganda), Dairy (Kenya), **Rice** (Tanzania) and Wheat (Ethiopia). The development of the proposal involved succinct analysis of the cassava chains including informal domestic and export market consumption.

12. **One-egg-per child for poverty reduction and food security in Rwanda:** This is a study Dr. Ebong spearheaded in order to identify options for enhancing nutrition security in Rwanda. It involved predominantly desk study; stakeholder consultations and thought processes. It premised on status of progress reports of Rwanda Poverty Reduction and Food Security Strategies that indicated that the country was progressing very well in realizing her CAADP commitments and MDG targets. But

nutrition security was lagging behind especially among the extreme poverty groups who have little land. Consumption marketing and consumption records identified poultry and the key investment area for the rural poor. A proposal was development for consideration for funding under the Global Agriculture and Food Security program. It premises in linking the rural poultry systems to the market for inputs (feeds and drugs and day old chicks) and output markets; which public sector facilitation (research; extension and governance) and private sector financing through banks and SACCOs).

13. **Rwanda Agriculture Board (RAB) Strategic Plan 2013/14-2017/18:** This was a consultancy process where Dr. Ebong was given the responsibility of working together with an external consultant recruited to undertake the process and advise RAB management on recommendations arising from the consultancy process. The process was duly concluded and approved by RAB Board.

14. **RAB Biennual Scientific Conference:** As a process of mentoring the organization into scientific culture and expose RAB to national, regional, and international science and knowledge market, RAB assigned Dr. Ebong to backstop the Conference Organizing Committee of the first Biennual Scientific Conference (August 23-25, 2013); with commendable success following similar experience in NARO. A total of --- local, regional and international submissions were presented either in poster or oral presentations with several keynote addresses on issue of food security, climate change and livelihoods.

15. **Livestock Intensification Program:** This is the latest assignment given to Dr Ebong as a contribution to the Strategic Plan for Transformation of Agriculture in Rwanda (PSTA III). Dr. Ebong was given the responsibility of leading a taskforce whose terms of reference were (in summary) to evaluate interventions in the dairy, meat, eggs, honey and fish value chains for technical feasibility, economic viability, and social acceptability in the context of the natural resource constraints; and heightened need increasing the contribution agriculture sector development to transformative growth of the economy. **Rice** features prominently in this study as a strategic crop under the existing land consolidation policy and crop intensification program (CIP). **Rice** presents a paradoxically scenario, where marshland reclamation deprives livestock keepers of reserve grazing resources; but also a unique opportunity under land consolidation policy, for intensification and integration crops and livestock for efficient land use in the production of plant and animal source foods. The process is moving towards a logical conclusion. It will funded by Government of Rwanda under a multi-donor platform.

16. **Rwanda Dairy Development Project: Baseline and Market Study of the Dairy Value Chain in Rwanda:** The objective of the study was to provide baseline and examine the expected competitiveness of the dairy sector in Rwanda to inform the IFAD funded project for dairy improvement in Rwanda. The study provided the required information on performance of the different segments of the dairy value chain. It established that contrary to popular perceptions production has not overtaken demand and a number of processing plants are operating below capacity because of competition between formal and informal markets.
17. **Agricultural Synergies Project Development**: This project started with a consultative workshop of experts on animal source food security and climate change impact in Montpolier (World Report Institute 2015) where Cyprian represented Rwanda among the Panel of Livestock Experts. The consultative meeting resulted into a NORAD support collaborative project on Agricultural Synergies implemented by Rwanda Vietnam and Colombia, with the support of Princeton University USA as the Lead Institution, and CIAT and CSIRO as support institutions in model development. The major of the project was to examine options for a sustainable feed future of milk and meat production in Rwanda. The specific objective of the project was to identify, characterize, determine the capacity to meet current and future demand for livestock products in the domestic and export markets. Cyprian has been instrumental in providing technical guidance and mentorship in the project implementation especially in the areas on survey designs, data collection, and management of partnerships with collaborating institutions.
18. **Development of tools, modeling and analysis for the Rwanda El Nino and Climate Change Resilient Livestock activity (P160413):** This a bridging support by World bank for complete the niches characterization and model development process. Implementation awaits completion and signature on the Memorandum of understanding between RAB and World Bank.
19: **Greening GIRINKA**: This is a response to a call to A DFID funded project under auspices of the National Environment Fund –Rwanda (FONERWA). Send A Cow Rwanda (SACR) and Rwanda Agriculture Board (RAB) are lead institutions. Cyprian has been instrumental in drafting the concept note for attract inputs from pertinent stakeholder; collating inputs therefrom; identifying partners and synthesizing the final CN. Despite end of contract, Cyprian is committed to supporting the full project development through online communications.

IX Employment Record:

January 2009- November 2016 Rwanda Agriculture Board (RAB/ISAR)

Position: Senior Scientist/Expert – Animal Nutrition

(a) Providing support to management in areas of research, extension; policy and strategic planning
(b) Identifying areas of investments in research in livestock especially feeds and feeding
(c) Identifying training opportunities and other capacity building needs for young scientists and technicians
(d) Guiding research implementation and training processes
(e) Guiding young scientist in the proposal development and project development, report writing including publications
(f) Any other duties assigned by the competent authority
(g) Supervision of MSc and PhD students

2007- to 2009: National Agricultural Research Organization (NARO)

Position: Deputy Director General incharge Quality Assurance

Duties:

(a) heading the Quality Assurance Department;
(b) deputizing for the Director General
(c) developing quality standards and respective guidelines for conducting agricultural research and delivery of agricultural research services;
(d) checking research programmes and research services against agreed standards;
(e) registering and monitoring performance of agricultural research service providers in the public and private sector in accordance with the National Agricultural Research Systems Act (NARS Act 2005) of the Republic of Uganda
(f) facilitating and organising capacity building programmes for service providers to improve quality of agricultural research services;
(g) monitoring and vetting proposal for competitive grant awarding process against guidelines and agreed standards;
(h) overseeing and monitoring the process for agricultural research priority setting at national and zonal level against guidelines;
(i) screening and vetting official publications, reports and information releases by the council and its secretariat;

(j) reporting to Director General

(k) Part-time teaching in universities and supervision of MSc and PhD students

2002 -2007 National Agricultural Research Organization (NARO)

Position: Principal Research Officer

Duties: Duties remained the same. Promotion base on reward scheme

1996 – to 2002 National Agricultural Research Organization (NARO).

Position: Senior Research Officer

Duties:

1. Leadership of the Animal Production Research Program at Namulonge and Serere Agricultural and Animal Production Research Institute. The program does research in pastures and feeding management, and Animal Breeding.

2. National Coordinator of Livestock Systems Research Program, a component of the Agricultural Sector Program Support funded by Danida. It handles Research in Livestock production including breeding and nutrition, health, natural resources management and socio-economics. It operates at four NARO institutes and two faculties (Agriculture and Veterinary Medicine) at Makerere University.

3. National Coordinator of Livestock Early Warning Systems for monitoring animal nutrition in pastoral systems. This regional research program being implemented in Eritrea, Ethiopia, Kenya, and Tanzania. The Uganda component is in NARO and is implemented at Namulonge, Serere and Faculty of Agriculture Makerere University.
4. Research in various aspects of livestock systems and nutrition. Currently, I am implementing the Cattle Methane Reduction Project. This is a collaborative research between the Ministries of Water, Lands and Environment (MELE), NARO, and Makerere University.
5. Teaching at the University and Supervision of postgraduate students (MSc and PhD students)

1991 – 1996 Senior Research Officer in NARO

Position: Scientist

Duties

1. Analysis of Livestock systems to diagnose constraints and opportunities
2. Implementation of research projects
3. Teaching and supervision of postgraduate students including MSc and PhD students

1989 – 1991 Scientific Officer in the Ministry of Agriculture, Animal Industry and Fisheries

Duties

1. Revitalization of Animal Production Research at Namulonge: This involved development of research agenda, mobilization of resources and development of training needs of the program at Namulonge.

1979 – 1981 Agricultural Officer in the Ministry of Agriculture

Position: Young Farmers Advisor

1. Promotion of Young farmers in Schools in Apac district
2. Training Rural youth groups
3. Reporting to National Young Farmers Coordinator

1979 – 1980 Agricultural Officer Ministry of Agriculture

Duties

1. Offering advisory service to farmers at country level.
2. Management of Tractor Hires Services in the county
3. Assessing crop production and monthly food security situation in the county
4. Reporting on returns and problems in the county to the district.
5. Supervise subordinate staff at the office and the sub counties.