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Varsity Focus

A Newsletter from the Office of the Vice-Chancellor

University of Nairobi

November, 1995

Focusing on Entrepreneurship



Department of Food Technology & Nutrition, (CAVS)
The Swiss Ambassador and the Vice-Chancellor at the Pilot Plant

and Academic Excellence

from the UC's desk

Various statements by the Chancellor, the Minister for Education and the Secretary of Commission for Higher Education during the last three years or so, clearly indicate that income generation from the resources available to the public universities must be viewed as a matter of institutional survival rather than sideline activity. This implies that a business dimension has to be added to the traditional mission of the University.

Limited funding from the exchequer, escalating costs of financing University operations and the World Bank pressure on the government to reduce education budget from 37% to 30% have led to the adoption of entrepreneurial role in addition to the role of teaching and research.

This new turn of events made the University to appoint a committee to look into ways



Prof. F.J. Gichaga

and means of income generation for sustainability without hindering the cause for which we were established.

I am happy to report that the University has received the recommendations of the committee and already some of the recommendations have been put in place, while some are under study.

For some time now, the University has been undertaking small-scale, Departmental production activities as a way of raising funds. We have found out that, these production units and service units can generate useful income. For example, the Department of Human Anatomy is providing mortuary facilities to the public at a fee; Dental Surgery is offering consultancy; Agriculture and Veterinary farms at Kabete are producing farm products for sale in order to generate income. The University of Nairobi is

endowed with the most valuable resource - human resource. With the recommendations of the committee, our aim is to develop income generating activities carefully so that they compliment our teaching and research activities.

from the Editor's desk

Focusing on entrepreneurship and academic excellence - the running theme of this issue - has been aptly chosen to amplify the new role that is emerging in the public universities.

Public pronouncements for the last three years have indicated that universities have to adapt an entrepreneurial role if they are to survive the prevailing hard times. Equipped with the will and drive as is characteristic of the University of Nairobi, plans to embrace this new role have already been drawn while others are being implemented in various units.

Research Funding: The remaining option has been contributed by a senior member of staff, who the editor would like to thank along with many others whose research papers we have received for this issue.

Varsity Focus pledges to keep regular and better coverage of all University activities. Colleges and individuals are requested to submit their contributions and information on events and issues pertinent to the University to the Editor in good time.

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EXTERNAL B.Ed. (ARTS) STUDENTS FINALLY GRADUATE

One hundred and eighty five external B.Ed. (Arts) pioneer students were among the 3578 who graduated on 10th December 1994. The message of joy they gave Kenyans when they put on their caps, hoods and gowns of honour to mark the culmination of an arduous but very successful journey was that -*The only unfinished journey is that which is not yet started.*

The External B.Ed. (Arts) programme was launched in 1986 following many recommendations dating back to 1960s when the need to build high level manpower was expressed following responsibilities created soon after independence. The first recommendation to establish correspondence education supported by radio was thus made in Kenya by the Education Commission of 1964, popularly known as the Ominde Report. There after the idea of teaching and learning at a distance featured in several Kenya government development plans.

In 1983 a task force set up to study the possibility of launching external degree programmes came up with two key recommendations which culminated in the launching of the External Degree Programme. One, there were large numbers of candidates each year, who qualified for university education but could not be absorbed due to lack of residential and teaching space. Two, distance education as a new course would provide those aspiring and deserving Kenyans with university

education and as spin off provide the needed high level manpower.

The External Degree Programme started offering a B.Ed degree because the Ministry of Education felt that there were many SI (Secondary One) and Diploma teachers who were trained to teach in certain classes only but who sometimes found themselves teaching upto "A" level classes due to shortage of graduate teachers. Also in some harambee secondary schools, "A" level holders with no professional training were shouldering heavy teaching responsibilities some of which they found overwhelming.

... External B.Ed. programme was therefore meant to give ... teachers training without removing them from the classroom.

The External B.Ed. programme was therefore meant to give these categories of teachers training without removing them from the classroom; using an innovative method of learning that they would access any time any where. These teachers have been learning at their own pace — unprogrammed, as opposed to the conventional mode which ignores differences in learning capabilities among learners.

Using distance education, study materials have been developed which are now used by the other local universities as study texts. Uganda, Zimbabwe and Tanzania have launched external B.Ed. programmes using materials developed for the University of Nairobi external B.Ed.

programme.

The teaching system has mainly been through the printed correspondence texts supported by audio cassette tapes and occasional face-to-face tutorial sessions. The course was launched with only two study units, that is History of Education and General Methods. All the other units were developed as the students were in session.

The notes of the study materials injected a great deal of inspiration to the programme. These notes which belonged to other faculties and different universities, together with consultation with Vice-Chancellors enabled the residential sessions to go on without the slightest hitch.

The fact that external students have acquired similar qualifications as internal students is a big eye opener in this country. At a time when university budgets are competing against rising numbers seeking university places, this programme should be expanded to call for a larger number of students in a variety of courses. Degree programmes taught for example in faculties of Law, Arts, Commerce, Building Economics and Land Economics can benefit heavily from distance education methods as these courses require little or no laboratory or workshop facility.

This would call for the establishment of a college or university of distance education which would concentrate on teaching through distance education just like the Open University of Tanzania which was

established with the assistance from the external degree programme experiences.

What do the students feel about the programme? They are excited. Without it they would not be calling themselves graduates now. They are proud of being graduates of the University of Nairobi. Although they say they found it challenging to combine work, studies and family commitments, they recommend the programme to other aspirants saying it is more flexible socially than internal programmes. But the memories will always be fond. Of the 592 who took their offers 385 continued to take their first year exams while 107 were non-starters. 185 have now passed living 67 to take supplementary and special exams. 96 of the 385 who discontinued themselves after first year exams are now time barred and are treated as drop outs. They can however make special appeal to the University to find out if their cases can be considered.

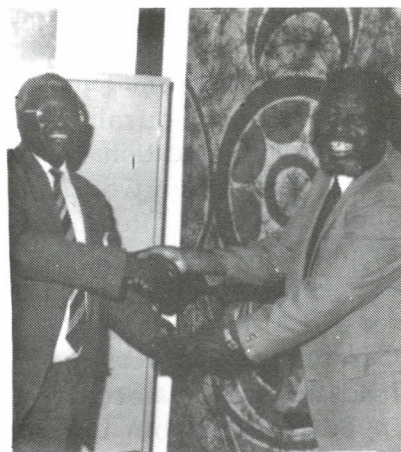
UNIVERSITY'S PRIMARY SCHOOL EXCELS IN KCPE

Kinzuu Primary School, based at Kibwezi Dryland Field Station excelled in its first KCPE attempt and became number two in the Division and number ten overall in Makueni District. All the seventeen pupils were admitted to secondary schools.

Varsity Focus wishes to congratulate the teachers and pupils of Kinzuu 'University' Primary School.



VC pins a medal on Professor Karani's lapel



A beaming Professor Munavu receives his medal

DONS HONOURED

Five scholars from the University of Nairobi were recipients of various state honours, bestowed upon them by His Excellency the President of the Republic of Kenya and Chancellor of the five public Universities Hon. Daniel Toroitich arap Moi during the 31st Jamuhuri day celebrations.

Those honoured included:-

Prof. Raphael Muatine Munavu, Deputy Vice-Chancellor Administration and Finance - The Order of the Grand Warrior of Kenya (OGW).

Prof. Florida Amakobe Karani, Deputy Vice-Chancellor, Academic Affairs, Order of the Grand Warrior of Kenya (OGW).

Prof. Samuel K. Sinei, Principal College of Health Sciences - The Order of the Grand Warrior of Kenya (OGW).

Prof. Joseph M. Nyasani, Principal College of Humanities and Social Sciences - The Order of the Silver Star of Kenya (SS).

Dr. Gideon Misoi, Senior Lecturer Department of

Mechanical Engineering, the Order of the Grand Warrior of Kenya (OGW).

Others who have received state honours in previous occasions include Prof. F.N. Onyango, Principal College of Biological and Physical Sciences, the Order of the Silver Star of Kenya (SS).

VARSITY HONOURS PROF. ARTHUR THOMAS PORTER

Professor Arthur Thomas Porter joined the list of honours of the University of Nairobi during the 22nd graduation ceremony when the Chancellor awarded him in absentia, the HONORARY DEGREE OF DOCTOR OF LETTERS. Following is the citation read to the congregation by the Vice-Chancellor, Prof. Gichaga:-

Arthur Thomas Porter was born on the 26th of January 1924 in Freetown, the capital city of one of the smallest West African States but which boasts one of the finest harbours in Africa. A product of Creoledom which he so ably described in 1963 in a book of the same name, Arthur Porter went to school

early and in 1944 at the age of twenty, had already graduated with a B.A. from Durham University, Fourah Bay College. His educational career spans the western world as it speaks for itself. After his first degree in his motherland Sierra Leone, he proceeded to study for a B.A. honours degree at Cambridge University. He holds a Postgraduate certificate in Education from London University and an M.A. from Cambridge. His Ph.D. in 1959 is from Boston University, U.S.A.

The international educational training which Arthur Thomas Porter had received produced a total scholar at home, teaching and researching in faculties of various universities, administration of institutions of higher learning. He was an individual committed to sharing his knowledge, findings, and experience with the world both in scholarly publications and in international planning and advisory endeavours: Between 1944 and 1958 the young Porter served as Assistant Lecturer and research associate at the University of Durham, Fourah Bay College, the University of Edinburgh and Boston University. The senior Porter seemed more settled to establish academics in his own home town at Fourah Bay College where he was a Senior Lecturer and Professor of History between 1962 and 1964. During this time, Arthur Porter's ability and interest in administration of Education and scholarship was already established as he became simultaneously the Chairman of the Department of History and the founder director of The

Institute of African Studies of Fourah Bay College. Incredibly committed to management of institutions of higher learning, Arthur Thomas Porter, was between 1962 and 1964, the Vice-Principal, Fourah Bay College.

One of the leading pioneer scholars in the African continent, Arthur Thomas Porter had already established himself internationally as an able academic and admini-



PROF. ARTHUR THOMAS PORTER
BA (Durham), Postgrad. Cert in Ed. (London), BA, MA (Cambridge), PhD (Boston), LHD (Boston), LLd (Malta) BLi. (Nairobi)

strative manager who was able to compete successfully when Kenya needed assistance with the establishment and development of her own institution of higher learning.

It is no accident that Arthur Thomas Porter became the first African head of this institution when he became the Principal of the University College Nairobi, then a constituent College of the Federal University of East Africa. He served in this capacity for six years: Characteristically, however Kenya recognised and appreciated Porters usefulness and retained him as the

UNESCO Field Station Officer in Kenya's Ministry of Education for another four years. Arthur Thomas Porter's career in academics and its management went full circle when he in 1974 returned to his own motherland Sierra Leone from Kenya, to become the Vice Chancellor of the University of Sierra Leone. He served his nation in that capacity for a whole decade. He was obviously a prophet recognised not only abroad but even better at home.

Administration of institutions of higher learning in Africa has not just become precarious. It is common knowledge that any academic who takes up this challenge quickly grows into what the academic community in University of Nairobi call a glorified clerk. Arthur Thomas Porter, inspite of his many decades of administrative responsibilities, remained a Professor of History who published even at the height of his administrative responsibilities, and finally was able to go back as a visiting Professor to the associated colleges of Central Kansas in the United States of America while hosted by Bethany College. The lead papers he has presented at conferences dealing with the practical elements of academic issues bear witness to an academic that knew how to be practical. The secret behind Porters distinction must be that he learned how to keep to his own academic area of expertise and be relevant in a simple way: The titles of his publications are typically the following: "Education in The New West Africa"; "Development of Higher Education in Sierra Leone"; "University Develop-

ment in *English Speaking Africa*" and "*The Special Background to Political Decision-makers in Sierra Leone*". He is a scholar who successfully married History, Sociology, Education and Socio-political development in a fertile polygamous existence. His most outstanding publication *CREOLEDOM*, published by Oxford University Press testifies as a socio-historical analysis of the development of Freetown society, which broke new ground academically in its use of Sociology as an in road to History.

Though a committed Sierra Leonean, Arthur Porter has demonstrated through-out his life that he is a child of the world, committed to using his expertise to improve education and scholarship and its management in Africa. He has been a member of many advisory bodies in Malawi, Kenya, Britain, Commonwealth, Denmark, the USA and of course Sierra Leone itself. At 68 years, his own nation still holds on to him for the precious gifts he has to offer, and called upon him in 1992 to be the Pro-Chancellor and Chairman of the Court of the University of Sierra Leone, responsibility he holds up to now.

Details of gigantic contributions by gigantic personalities are often taken for granted. Arthur Thomas Porter's contribution to the development of University education in Kenya and its management overcame challenges that a lesser African scholar and patriot might have given up on. What he found at Nairobi University College would have surprised any West African: there were very few

Africans on the academic staff and none at all on the positions of authority to qualify for what was known as the Executive Committee of Senate.

This was a position to be redressed. Arthur Porter on behalf of the Kenyan officers took the bull by the horn and virtually abolished the totally expatriate Executive Committee of Senate, standing up against the Professors with a personal undertaking to take full blame if the fact that the executive Committee of Senate did not meet, adversely affected the running of the University College. The affirmative action on the part of Arthur Porter facilitated the transfer of leadership to Kenyan academics and created the necessary foundation for the expansion and creation of new faculties. Allow me to mention one particular contribution that Porter made to the University of Nairobi. It was Arthur Porter who conceived of and effected the creation of The Institute for Development Studies to be funded directly by the Kenya Government as opposed to the funding that came from the Federal University, and to carry out joint research with the government. This apart, it was during the tenure of Porter that the faculties such as Education, Law, Agriculture and Medicine were set up.

Arthur Thomas Porter's contributions to mankind have been acknowledged all over the world: he has four civic awards from three continents. We are here to honour a scholar who has a Doctorate of Humane letters (L.H.D) from Boston University; Doctor of Laws

(LLD) from The Royal University Malta and the Doctor of Letters (D.Litt) from University of Sierra Leone.

We propose today to honour Arthur Thomas Porter, as the founder Principal of our own University ...

Besides these, the man we honour today has a Silver Medal, the Royal Society of Arts of Great Britain, Fellowship of the Royal Society of Arts, Great Britain, Phi Beta Kappa Society, Epsilon Chapter of Massachusetts, Boston University, U.S.A.; The Africanus Horton Memorial Lectureship, University of Edinburgh, Scotland; Symons Award, Association of Commonwealth Universities; Bernadin Lectureship, University of Missouri, Kansas City, U.S.A. and Honors Convocation Speaker, Bethany College, Kansas, U.S.A.

We propose today, to honour Arthur Thomas Porter, as the founder Principal of our own University, as a pioneer scholar son of Africa; a man who has not known geographical limitations, a man who is a nationalist with no national parochialism; a man large enough to use his academic expertise to dirty his hands and improve national academic status both at home and in nations well beyond his own; an educated man who has come out to educate the multitudes; an educator with a vision for the education of whole societies and nations. We honour a distinguished social Historian - a historian who has influenced societies and made history from the shores of the Atlantic in Fourah Bay to the

highlands of East Africa, and indeed our own University and Campus Professor Arthur Thomas Porter.

RESEARCH FUNDING: THE REMAINING OPTION

Social and economic transformation of a society will face many set backs if university education is not linked to research. Kenya is no exception. We need to rethink how best to use the highly trained manpower in Kenyan universities with a view to making our social and economic systems more progressive. This is one of the many ways in which university education can help Kenya to cope with the competitive world of global economy.

Why should we be concerned with the integration of funding university with research? It is not enough for parents to be more concerned with taking a child to kindergarten, nursery schools and other lower levels of education as it is the case every other January. University education too requires some kind of attention if it will be useful, first, to those in the lower levels of education system some time in future. Second, universities can, as innovation centres, enhance creativity and productivity in a society. The lower levels of education are also important but we shall not discuss them here. Suffice to point out that a kindergarten and a school (nursery, primary, secondary) prepare those who will join higher institutions of learning, be they technical institutes, colleges or universities.

Colleges (teachers' college, etc) and institutes of science and technology (such as Kimathi, Rift Valley, RIAT, etc) offer specialized technical, managerial and other operative skills to trainees before they join labour market. All sectors of an economy require personnel with these middle level skills and it is not possible to carry out many industrial and commercial operations if middle level skills are not available. University education is slightly different from that offered in institutions discussed above. As a service to a people, university

Very soon, many countries will enforce intellectual Property Rights and we may have to spend a large portion of our GNP to pay for copyright and patent royalties.

education is a symbol of where a society has come from and it will contribute to the direction of future development.

Universities are expected to produce more reflective and analytical people in areas of their training before they enter labour market. They are expected to become competent once they enter labour market and gain some practical work experience. Members of academic staff in different faculties are specialists in the fields where they conduct research. Research is the component of education that distinguish a university from other institutions of learning. Research in a university serves two-broad purposes. First, research generates knowledge (different from information). Knowledge simply refers to accurate and true explanation of phenomena. Such accuracy and truth is ascertained

through research methods that are developed and tested so that data that is used to make claim about the knowledge is reliable. It must explain phenomena to satisfy contemporary human needs. Secondly, knowledge that is generated through research in universities should be disseminated in a form and manner that people in a society will understand and use. Besides, such knowledge must be used to improve the condition of the society.

Knowledge that is generated through research in universities should be stored and disseminated in books, journals, microfilms, etc, for contemporary and future reference and possible improvement through further research.

These books and journals are the major source of university teaching material. Production of textbooks for given course that is offered in a university teaching department require substantial funding. Such textbooks may require prolonged research to generate data, to compile all the data and organize it into a book. Therefore, to generate data and publish a university textbook require more resources than is often realized. Funding of research can play a key role in this area. Kenya like many other countries must develop human resources for labour market as we begin 21st Century.

Major industrial countries and the Newly Industrialized Countries - NICs have embarked on education policies with a focus on research and development - R&D. This is the only way,

many have argued, these countries can prepare their people for the challenges of the new century. In future, Kenyans will have to contend with a more liberalized world economy. Very soon, many countries will enforce intellectual property rights - IPR - and we may have to spend a large portion of our Gross National Product - GNP to pay for copy right and patent royalties. There is therefore a great need to support research and training in universities in order for Kenyans to respond to emerging realities.

Literature is replete with evidence that university education that has research funding as the prime mover, has served humanity beyond the political borders of a country. We shall now review a few examples to show that we in Kenya have benefited from research that has been conducted elsewhere, and also that those who are associated with the research are trainers in universities.

Time Magazine of October 24th, 1994 p.35 has enumerated top researchers in the USA and Canada who were awarded Nobel Prize for 1994. Professor John Nash of Princeton University in the USA was awarded the prize for Economics. At the age of 22 years in 1950, Professor Nash wrote a doctorate dissertation on Game Theory to explain behaviour of different actors in the market place. The government of Kenya embarked on liberalization of the economy last year. Now that national and community economies operate on the basis of free market, Kenyans as producers and consumers of goods and services in the

market place are benefiting from ideas which were developed more than forty years ago. We owe it to humanity to make our contribution towards the generation of ideas and approaches through research because experience has proved that they work.

Nobel Prize for medicine was awarded to Dr. M. Rodbell of the USA National Institute of Environmental Sciences and Dr. Alfred G. Gilman of the University of Texas Southwestern Medical Centre in Dallas - USA. The two researchers (Dr. Gilman is also a trainer in a university) discovered cells in human body that help to sort out biological substances related to diseases such as diabetes. Kenya Medical Research Institute (KEMRI), Kenya Agricultural Research Institute (KARI), Kenya Industrial research and Development Institute (KIRDI) and similar research institutions are important. We are aware of the research effort that have been made by KEMRI on HIV virus that cause aids and also research by KARI that has led to the improvement of many food crops. These research institutes are strategic and there is a need to strengthen collaborative applied scientific research between them and the national universities because of the training component. This will also link the universities with communities at the grassroots, and with industrial and commercial sectors.

Turning to physics, retired researchers and university trainers, Professor Clifford Shull of Massachusetts Institute of Technology, USA, and Professor Betram

Brockhouse of MacMaster University in Ontario - Canada both shared 1994 Nobel Prize for Physics. Physics is one of the natural sciences and Kenyans have continued to rely on basic research findings in physics to improve on services such as generation of electricity for our homes and the making of machines that increase the efficiency and rate of industrial production. In the 1940s and 1950s Professors Shull and Brockhouse helped perfect the technique called Neutron-Scattering and led to advances in semi-conductors and super-conductivity.

Lastly, an expert in the field of catalysis (chemical processes in industrial manufacturing especially improvement of efficiency) at the University of Southern California, Professor George Olah discovered in the 1960 how best to refine oil and produce more efficient automotive fuel. Recall that there is an oil refinery in Mombasa. Kenyans use petroleum products from the refinery on daily basis, especially in transportation sector. Some of the research finding by Professor Olah in the 1960s are therefore useful in our lives today. For these contributions in knowledge about nature of crude oil and how to make better fuels, Olah was awarded Prize for chemistry in 1994.

We can enumerate more research breakthroughs by researchers and trainers that have been made within university settings. A common denominator in all these is that most of those who are associated with these research findings are also trainers in universities. Funding of

research must have been associated with training at the universities. Recall one famous economist of post World War II search for a world monetary system - John Maynard Keynes. Initial ideas on money in an economy by Professor J.M. Keynes were brought to public attention when Keynes worked as an officer with the British Colonial government in India early in this (20th) century. However, it was not until Keynes joined London School of Economics that he had time and a conducive work environment that he reflected more on the theory that latter became key to monetary policy. Keynes is a Nobel Prize winner for economics.

Nobel Prize winners who are mentioned above, universities where they carried out the research and the immediate beneficiaries of their research findings are all from the technologically advanced societies. The reader is aware that these achievements by individual researchers have also benefited people in other societies. More importantly it is obvious that university setting is the vanguard of these discoveries. Kenyans must return to the "WORKSHOP", and university education that is focused on research work in the various teaching departments and institutes is one window of opportunity. A national research and development program based in these departments and institutes can be used to broaden the base for social and economic transformation. After

all, Kenya like other countries should be concerned that 21st century is only five years from now. Competitive human resources that will get into the labour market will largely depend on how people are trained. Whether products made in Kenyan industries meet the needs such as taste of consumers in local and international markets will very much depend on research on new ways of doing things and development of suitable industrial machines and tools

Whether products made in Kenyan industries meet the needs such as taste of consumers in local and international markets will very much depend on research on new ways of doing things and development of suitable industrial machines and tools to manufacture such goods.

to manufacture such goods. It is here that the role of university education and research come in as we have to learn how to do things differently: produce the things we have always produced but of higher quality and also invent new products. This can be done through increased public funds to the universities and more direct involvement by corporate organizations in the financing of research at the universities.

Results from research work that has been carried out in Kenyan public universities settings show that there is a pool of highly competitive researchers who teach in the various departments. For example, quality pioneering research work by scholars at the university have been translated into viable innovations. Research on Nitrogen Fixing Organisms - NFO as an alternative to

artificial fertilizers by scientists at the Department of Soil Science. Scientists in the Department of Crop Science have developed three varieties of pigeon pea maturing early and resistant to diseases. Another pioneering research in the same department produced a new type of onion now available in the market. At Housing and Building Research Institute (HABRI), research on stabilized soil blocks, fibre concrete tiles and pozzolana is a breakthrough in the building of cheap houses now offering homes to people in some communities in Nairobi, Central, Rift Valley and Western provinces. Dr.

Kassim Farrah of the Department of Range Management (also Regional Co-ordinator of Pastoral Information Network Program - PINEP) with other researchers have geared their research towards improvements of the drylands. Intergovernmental Authority on Drought and Development (IGADD) countries now have a framework for the coordination of resource development in arid and semi-arid Areas.

An interfaculty research combining scholars from social and medical sciences on health and behaviour focused on sexually transmitted diseases (STDs). One of the researchers in the team is Prof. E. Ayiamba of the Department of Geography and the findings from this research are now adopted by World Health Organization (WHO). Apart from research work by individual academic members

of staff, every year, both the staff and students at the Department of Urban and Regional Planning carry out research surveys in rural communities, cities and the various regions in Kenya. The results of these surveys have been used to prepare plans for learning purposes but have been adopted by various urban areas,

sometimes with very minor changes. Some of the towns that have benefited from work by the staff and students include Nakuru, Mombasa, Limuru and Chogoria. Regional studies by same department have been useful to many District Development Officers. So far information that has been generated about urban areas and the various regions through the surveys is among the most authoritative sources on appropriate approaches to urban and regional planning in Kenya.

Most of research breakthroughs that are cited here have been funded through institutions outside Kenya, e.g. the research on STD funded by Carnegie Corporation, USA. In Kenya there are attempts to fund research from local researchers by scholars in public universities. Research to improve yields of Katumani Composite B by Dr. D. Nguatha Mungai who is a climatologist and an authority on agrilimatology is one of them. Dr. Mungai's work was funded by National Council of Science and Technology (NCST) and

Increased public funding and more direct involvement by corporate organizations in Kenya to finance university education through research is now essential than ever before.

the Deans Committee of University of Nairobi but even here some funds were provided by the Dutch government through the Wageningen Agricultural University. Research grants from sources outside Kenya are useful and should be encouraged. It is one of the many ways that help Kenyan scholars to travel and learn what

researchers in other countries are doing. More importantly, results from the findings in research that is funded by governments and institutions outside Kenya have a direct bearing in our lives. However, these sources should only serve to supplement funds for university education and research in Kenya. Increased public funding and more direct involvement by corporate organizations in Kenya to finance university education through research is now essential than ever before. Imagine a school of journalism with research funds amounting to KShs.5-10 million annually which is contributed by all media firms in the country, a faculty of commerce that is equally supported by the banking industry, or a department of planning that has research funds contributed by urban local authorities and the major urban developers such as Kenya Building Society and Housing Finance Company of Kenya. If that was the situation, the School of Journalism would tailor its training so as to support more research in the most effective ways of gathering and

processing news. This will help the media to effectively communicate with the consumers of news. In turn print and electronic media will be a more reliable and useful means of educating and informing the society now that our lifestyles are changing fast. The banks will (for example) improve on their customer service and the long queues that are common in many of them will be reduced drastically. Local authorities and a planning department in any of the universities can undertake a long term research on how to plan and manage urban development. One area that requires immediate attention is how to make city/urban planning in Kenya more responsive to the changing needs of local communities. In turn, the confrontation we are used to, between the informal sector operatives and civic authorities which symbolize conflict in the making of choices in the use of land in urban areas will be minimized. There will also be a need to bring into light a better understanding of how existing mechanisms of urban and allocation and urban planning work. Solutions to problems that are associated with land allocation mechanisms and how planning and financing of development should relate to the highly localized community economies will lead to generation of more rate and business taxes, more and improved services will be provided and Kenyan cities and rural areas will be better places to live and raise families.

Dr. Karanja Mwangi is a lecturer, Department of Urban and Regional Planning.

PROMISING FINDINGS ON MOSQUITO CONTROL

Research carried out by Dr.P.H Kahindi of the Department of Botany shows that *Bacillus Thuringiensis var. Israelensis* has potential for mosquito control in Kenya

Malaria and other mosquito-borne diseases continue to exert a heavy toll on manpower and agricultural productivity in many areas of tropical Africa. The main vectors of malaria in

Kenya are *Anopheles, arabiensis, An gambiae, An funestus* and *An merus*. These vectors breed in most lowland areas, particularly in rice irrigation schemes. In the past, control strategies have relied heavily on the use of residual chemical insecticides, which through effective spraying, have raised great concern due to environmental pollution and the development of resistant strains of insects. Behavioural polymorphism in some species,

particularly *An Gambiae*, has further dented the reliability of residual spraying. Faced with such problems, attention has been directed at the identification of other methods of mosquito control. In this regard, the use of natural enemies (biological control agents) has shown great promise for use in an intergrated control approach.

The spore-forming bacteria; *Bacillus thuringiensis var. israelensis* (B.t.i.) and B.

Stop Press !!!



His Excellency the President has appointed Professor Samson K. Ogeri as the new Chairman of the University of Nairobi Council in accordance with Sec 14(1)(a) of the University of Nairobi Act 1985. He takes over from the late Dr. L.G. Sagini who died after a road accident.

Prof. Ogeri is Kenya's Permanent Representative to the United Nations Environmental Programme (UNEP)

Sphaericus produce toxins that are highly lethal to mosquito larvae, but are otherwise innocuous to most non-target aquatic organisms and vertebrates.

Use of B.t.i. for mosquito control

Since its discovery in Israel in 1977, B.t.i. has been successfully tested against a large number of mosquito species in many parts of the world. Its selectivity for mosquito and backfly larvae is one of its most desirable

attributes. Today, B.t.i. is the most promising and most successful of all "larval-mosquito-larvae-insecticides". Briefly, B.t.i. is very similar to stomach poison in that it must be ingested. When spores and protein crystals of B.t.i. are ingested by a susceptible species, the insects mouth parts and gut epithelial cells are destroyed as a result of swelling, distortion, and finally, bursting of the cells leading to death. Depending on the concentration, type of inoculum, and the mosquito

species involved, death may occur in minutes.

In Kenya, B.t.i. formulations were tested both under laboratory and field conditions. A wettable powder of B.t.i. lot RIJ378 prepared by Roger Bellon S.A. was bioassayed against 2nd, 3rd, and 4th instar larvae of *Aedes aegypti*, *Culex pipiens fatigans*, *An-gambiae* and *Anarabiensis*; under a variety of conditions such as water type, larvae age, salinity, PH of water, pond water sediment etc. Despite all these

differences in parameters, B.t.i. was found to be highly effective against all the four mosquito species tested. This led to further trials under field conditions where two B.t.i. formulations were tested against early 4th instar larvae of *Ae aegyti*, *Cx.p. fatigans*, *An gambiae*, and *An arabiensis*. A Teknar formulation, and rectobal, both aqueous suspensions gave excellent results when applied at three dosage levels of 0.125, 0.25 and 0.5 Kg/ha. Within 12 hours of application, mortality levels in the ponds reached 75% in all four mosquito species, with mortalities reaching 100% after 24 hours.

One drawback that was realized in so far as the efficacy of B.t.i. in the field is concerned, is the lack of persistence. B.t.i is rapidly destroyed by Ultra-Violet (UV) light, and within 2 days, virtually all the spores and vegetative cells are dead. This has prompted for a search of locally-occurring bacteria that are lethal to mosquito larvae under the local conditions, and so also for an incorporation of UV-stabilizers in future B.t.i. formulations. The search for locally-available bacteria is already underway in collaboration with ICIPE, and only time will tell of the efficiency of the local isolates.

In the meantime, the volume of information on B.t.i., including its future potential is gradually increasing, and all indications are, that it has a fairly good chance of replacing or at least complementing chemical insecticides in practical use. The fact that it attacks mosquito larvae - means that it has the advantage of targeting mosquitoes at the breeding

stage, when they are fragile, confined, and unable to fly.

Dr. James H.P.Kahindi is a lecturer in the Department of Botany

UNIVERSITY OF NAIROBI : A NATIONAL EXPERIENCE

Immense and immeasurable, are the only words that can describe the contribution of the University of Nairobi to Kenya's development and it's magnitude, diversity and the far-reaching impact of that contribution.

Like the city in which it is located, the University of Nairobi is a national experience. With lecture theatres and halls of residences to house over 10,500 students from all over the republic, the University has continued to upgrade its facilities within its six colleges to meet the ever rising demand for space.

With all the Nairobi city to experience, learning does not stop at the campus gates. This is an opportunity for students to socialize with the would be employers. This alone makes it the University of choice for students searching for the best. The University of Nairobi can be a connection between where you are now and where you want to be in future. It is generally a meeting of minds.

If all people UON has trained since 1963 were to stop working today, Kenya would stand still

The University of Nairobi has rendered a clean account in enhancing development in Kenya's socio-economic and political spheres and thereby justify objectively and conclusively account for the vast amount of human,

financial and material resources that have been invested over the last 32 years. If all people the University of Nairobi has trained since 1963 were to stop working to day, Kenya would stand still. The University has contributed alone in developing human resource both qualitative and quantitative much so that no other institution has done the same.

To date the University has trained over 58,000 in almost all fields. This has provided the nation with a large pool of highly educated and trained professionals and technical experts in an extremely wide variety of disciplines and domains of human endeavour. These are the people who are at the helm of our National economy to day. They are people who are occupying vital positions and playing key roles in all sectors of Kenya's social, economic and political life.

University of Nairobi graduates constitute the bulk and in some cases almost the entire complement of the professionals and technical experts practising in Kenya to day. The University is charged with the responsibility of providing new and deeper insights into all aspects of our national realities. In this regard, the University of Nairobi constitutes without doubt the biggest, most diversified and dynamic research institution not only in Kenya but in the whole of the region South of Sahara excluding South Africa. In effect, one of the primary duties of every member of the academic staff of the University is to be continually engaged in conducting research, publishing and disseminating.

It is safe to proudly say to day that, in Kenya one cannot discuss higher education without mentioning the name of the mother and father of all public Universities in Kenya - University of Nairobi.

FROM THE DEPARTMENTS

Chemistry Workshop

The First Theoretical Chemistry Workshop in Africa was held at the Institute of Nuclear Science, University of Nairobi between 20th and 24th February, 1995.

The workshop which was jointly organized by Department of Chemistry, was attended by scholars from Lesotho, Uganda, Sudan and Botswana.

The workshop aimed at bringing together, scientists, industrialists, educators and other professionals from various fields to exchange views and ideas in chemical science and to show how the knowledge so developed can make chemistry work in harmony for the benefit of human kind.

African Academy of Sciences donates

The African Academy of Sciences recently granted KShs. 17 million to the Department of Agricultural Engineering for research on soil and water management. The agreement on this grant was concluded at a ceremony of signing of the memorandum of understanding between the University of Nairobi and the African Academy of Sciences, on 14th February 1995.

The program's mission is to

provide training and research with a view to support sustainable, economically viable and environmentally sound development and management of soil and water resources. Areas of concentration include quantification, evaluation and enhancement of knowledge in soil erosion and conservation of soil fertility improvement of remote sensing, geographical information systems, land evaluation and land use planning, agricultural hydrology, irrigation, drainage and water harvesting, watershed system.

This program will contribute to this overall goal by providing the scientific information upon which decisions on appropriate technologies and approaches can be made.

The President of the African Academy of Sciences Prof. Thomas R. Odhiambo briefly explained the articles and operations of the Academy and its desire to collaborate with institutions of higher learning and in assisting the University of Nairobi to achieve its objectives, the African Academy was achieving its objectives.

In his key note address after signing the memorandum of understanding, the Vice-Chancellor, paid glowing tribute to the President of the Academy, Prof. Odhiambo for his contribution to knowledge in the country. "As a renowned scientist, you have continued to be an inspiration to many of us," he said.

Turning to the project, Professor Gichaga said, "The University of Nairobi encourages the establishment of cooperation and links

between its departments and other institutions both locally and internationally."

The memorandum of understanding aims at formalizing scientific cooperation between the African Academy of Sciences and University of Nairobi and enables the Department of Agricultural Engineering to embark on research and training program in soil and water management. To date, the program has trained 50 M.Sc. graduates from Tanzania, Ethiopia, Sudan, Uganda, Zambia and Ghana. With the Academy's support, the department has realized its objective of being the center of excellence in the soil and water management research activities in the region.

PINEP REGIONAL WORKSHOP

Pastoral Information Network Program (Pinep) held its regional workshop in Nairobi, where many research papers were presented.

In a speech read on his behalf by the Principal of the College of Agriculture and Veterinary Sciences Prof. D.M. Mukunya, the Vice-Chancellor considered the participation of scholars from other countries as a welcome contribution to knowledge. He assured them that the University of Nairobi considered their participation and contribution of utmost value to the development of University research. The University of Nairobi on its part he said was very keen on encouraging collaboration in research between its academics and those from other universities in Eastern Africa Region.

"It is due to the belief in the importance of corporation between universities that the University of Nairobi established the Pastoral

arduous, but important task than yourselves. We can all agree that pastoralists have a wealth of knowledge accumulated over many years

now more clearer that pastoralists are not as ignorant as previously thought and that their knowledge is not without value. In addition, the failure of many development projects initiated in disregard of pastoral indigenous knowledge has brought doubt about the efficacy of modern knowledge alone as an instrument of development. This inadequacy of modern conventional knowledge creates room for looking at alternative knowledge systems.



Information Network Program with its headquarters at the Department of Range Management;" He added. The program covers seven countries in the Eastern Africa region (i.e. Kenya, Uganda, Tanzania, Ethiopia, Eritrea, Sudan and Djibouti). and has three components: training of pastoral development manpower at masters level, research on pastoral issues and research result dissemination on Publication on pastoral development. PINEP as a program is unique because it was initiated by pastoral scholars within the region and therefore has the potential not only to carry out more relevant research but of being sustainable over a long time span.

"PINEP is carrying out its mandate most appropriately by gathering pastoral scholars from the region to deliberate on the potential usefulness of pastoral indigenous knowledge for sustainable development. I cannot imagine a group more qualified for this

that has been a key to their survival in arid environment. We can also agree that this knowledge has been neglected along with the general neglect of pastoral development as a whole."He said.

The Vice Chancellor said that, pastoral indigenous knowledge, had been neglected for a long time, because of prejudice, actual repression and negative characterization of pastoral indigenous knowledge. Terms such as "cattle complex" and pastoral "irrationality" were coined in the colonial era to typify pastoral production behaviour. This attitude toward pastoralists and their knowledge has lived on in the minds of colonial scholars and African Educated elite a result of which all of us have been brought up to believe in these erroneous ideas about pastoralists.

Research in the last three decades by anthropologists and pastoral scholars has changed somewhat. It is

"I am sure this is an opportunity most welcome by the academic community of pastoral scholars to bring to the awareness of the public their researches on various aspects of scholars of pastoralism to reveal the real strength and weakness of pastoral indigenous knowledge; to start out the useful aspects from the merely folkloric. This is necessary to avoid romanticizing pastoral culture. We know that like other knowledge systems there are aspects of pastoral indigenous knowledge that have become obsolete with development. What is important is the dynamic aspects of pastoral indigenous knowledge. It is only through careful research that these aspects can be sorted out." he added.

"I have all the confidence in your ability to critically evaluate the available stock of pastoral indigenous knowledge for its usefulness for contemporary pastoral development. This is ultimately a responsibility that pastoral scholars owe to their community to discharge. I wish you the best in your deliberation and look forward

to your recommendations."He concluded.

ANALYZER FOR VETERINARY ANATOMY

Postgraduate students under-taking research in morpho-metric analysis on various mammalian tissues have a reason to be grateful to the German Educational Exchange program (DAAD) which donated an image analyzer worth KShs.814,000 to the Department of Veterinary anatomy.

The equipment, as the Chairman indicated, will help the Department in research, especially in the quantitative characteristics of biological tissues at both cellular and organic levels.

The Regional Director, DAAD, Dr. Richard Jacob said that his organization had done everything to promote the teaching of science at the University. "My organization has given 600 scholarships to Kenyan universities." he said.

Prof. F.A. Karani, Deputy Vice-Chancellor (Academic Affairs), thanked Dr. Jacob for the donation and expressed the hope that DAAD would continue to fund University activities. She said that German Government aid to the University of Nairobi and the Department of Human Anatomy is probably the oldest, dating way back to 1962. "Most of our senior members of staff are a product of this technical cooperation that we have enjoyed. Prof. Karani assured the Director that the equipment will be used for the intended purposes.

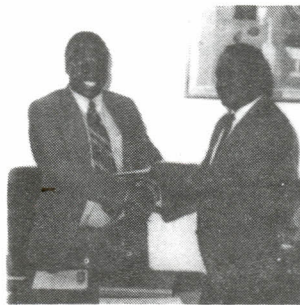
USIS DONATES BOOKS

The University has received a donation of books from the United States Information Services.

Handing over the books to the Vice-Chancellor, Ms Marilyn Hurbet, Director of USIS, appreciated the long standing relation between the University of Nairobi and United States Information Services especially in the promotion of academic cooperation.

The Vice-Chancellor thanked the Director for the donation of the books. He noted with satisfaction that USIS had been of help to the University of Nairobi in many areas, especially in scholarships. He informed the Director that, many of the University's senior scholars had benefited from USIS Fulbright awards and some were still pursuing their scholarships in various institutions in the United States. Others present, included, Ms Marianne Scott, Cultural Attaché, American Embassy, Ms Salome Mathangani, Deputy Librarian, University of Nairobi.

BML SUPPORTS AIESEC



Business Machines (Kenya) Limited donated one Olivetti Personal

computer and KShs.30,000 (annually) as part of the International Association of students interested in Economics and business Management (AIESEC) Corporate Development Program.

The AIESEC, University of Nairobi chapter has started a major youth initiative to prepare students for future professional business through the International Traineeship Exchange Program (ITEP) and its corporate development program. A Dutch student, Mr. Paul Van de Griendt benefited from this program and was attached to BML software division for eight (8) months.

The purpose of AIESEC is to contribute to development of people and society with an overriding commitment to international cooperation and understanding.

LINKS

Varsity links enhance women economic status

The University of Nairobi is engaged in the University Development linkages project (UDLP) with two American Universities - Pennsylvania and Tuskegee. The project being carried out from the Department of Food Technology and Nutrition, at the College of Agriculture and Veterinary Sciences is called NUTRIBUSINESS PROJECT.

Nutribusiness, is a small community development research project that will help women earn money by developing, producing and selling nutritious baby food to improve the health of young children.

The universities are collaborating with women groups in the districts of Bomet in western Kenya and Murang'a District in central Kenya. Their participation in product development, production, and marketing could improve the economic status of women in these districts.

Despite the agricultural productivity of the two districts, a number of children at weaning age remain malnourished in both urban and rural areas. According to the Kenya Bureau of Statistics, at least one-third of Kenyan children under age five suffer from severe to moderate malnutrition complicated by a high incidence of diarrhoea and weaning stress. The period of "weaning" (transition from an exclusive diet of breast milk to household foods) begins at about six months of age and lasts until 24-36 months. Infants may receive little more than cereal-based gruel prepared under un-hygienic conditions, sometimes with contaminated water. For children in developing countries, this is the most vulnerable period of life.

The project's rationale is that a locally produced, culturally acceptable weaning food, used in conjunction with breast feeding, can bridge the weaning period to improve infant and child morbidity and mortality. Past efforts to introduce a culturally acceptable, home-prepared weaning food in other developing countries, particularly in a recent project in Peru, have proven effective. In Kenya, women's cooperative associations have a long and successful history. During the

first year of the activity, women's groups in both districts have expressed strong interest in undertaking cooperative processing of local crops into weaning foods. Because both districts are agriculturally productive, surplus crops are available at harvest time. Thus, diverting crops from household consumption or normal commercial channels is not necessary to produce the weaning food.

Although the two districts share demographic similarities, they are quite different culturally. They also produce and consume different crops. These differences will allow a comparison of the success of the nutribusiness project in two district settings.

Women's groups in the districts of Bomet and Muranga have organized themselves to make decisions on which women should plant what crops to supply the processing facilities. Three villages in the district of Bomet and four in Muranga will undertake various aspects of the project.

Dr. Audrey Maretzki, Dr. Eloise Carter, and graduate student Susan Gabriel traveled to Kenya in January to join their UON colleagues in conducting a Rapid Multidisciplinary Appraisal (RMA). Based on the RMA findings, the most likely marketing targets for the Bomet women are in peri-urban areas of Kericho and Bomet districts, while the Muranga women will probably market their product in Muranga town and in Nairobi, the capital.

Although Kenyan women provide up to nine percent of agricultural labour, food processing, and marketing in

many areas of the country, agricultural extension and development programs have frequently overlooked women and instead have been directed at men. The linkage will train women in the entrepreneurial and technical skills needed to operate a weaning food processing operation. Food and nutrition information, essential to understanding the dietary needs of infants and children, will be incorporated into the training. The linkage solicits local women's knowledge of traditional and current infant feeding foods as well as their knowledge of the conditions which could influence the involvement of women in a food processing and marketing venture.

VC ATTENDS AAU CONFERENCE AND JOINT COLLOQUIUM IN LESOTHO

The Vice-Chancellor, Prof. F.J. Gichaga attended the AAU conference and the joint colloquium which was held between 16th and 20th Jan., 1995.

The conference brought together, Rectors, Vice-Chancellors and Presidents of universities in Africa. Over a total of 305, representing over a 100 Universities and other international organizations attended the conference.

Up the Ladder

Prof. I.A. Wamola has been appointed on promotion as full Professor in the Department Medical Microbiology.

Professor Isaak Albert Wamola obtained his B.A. (Biology and Chemistry) from Hampton

Prof. Ayiemba is currently the Associate Dean, Faculty of Arts.

Dr. Robert A. Obudho has been appointed on promotion as an Associate Professor in the Department of Geography.

Professor Obudho, holds an A.A. Sc degree from State University of New York College at Cobleskill, U.S.A. (1964) and a B.Sc. (Geography and Accounting) from State University of New York at Albany, U.S.A. (1966), a Post graduate Diploma in Geography Education, University College, Nairobi (1967). He obtained his masters and Ph.D from Rutgers University and New Brunswick, New Jersey, U.S.A., in 1970 and 1974 respectively.

Professor Obudho joined the University as a Lecturer in 1985 and was promoted to the position of Senior Lecturer in 1987. He has authored five text books, edited ten others, contributed over 30 book chapters. Professor Obudho has over twenty papers in referred journals. He has supervised nine (9) postgraduates. Professor Obudho is the founding Editor of African Urban Quarterly.

Dr. Julius W. Mwangi has been appointed on promotion as Associate Professor in the Department of Pharmacy.

Professor Mwangi holds a Bachelor of Pharmacy degree, 1979, M.Sc. (Pharmacy) 1982 and Ph.D (Pharmacy) 1988 all from the University of Nairobi.

Professor Mwangi joined the University of Nairobi in 1982 as a tutorial fellow and rose to the position of Lecturer in 1984 and Senior Lecturer in 1991. He has a vast experience in the teaching of Pharmacognosy.

His main areas of research interests are (1) The essential oils, (2) Traditional Herbal Medicine (3) Medicinal and poisonous plants. He is currently supervising a Ph.D student.

Professor Mwangi is a recipient of an International research grant award from the International Foundation for Science (IFS, Sweden). This grant will enable him to investigate the phytochemical and Pharmacological activities of *Synadenum Compactu*. This is a plant which is traditionally used to treat East Coast Fever, which is a very serious disease in cattle. (This work is in progress). He has attended many seminars and conferences. He has published over 35 papers in referred journals.

Dr. Anastasia Nkatha Guantai has been appointed on promotion as an Associate Professor in the Department of Pharmacy.

Professor Guantai obtained B. Pharmacy (University of Nairobi) 1978, M.Sc. (Pharmacy) 1983 and Ph.D (Pharmacology) 1992, (University of Nairobi).

Professor Guantai joined the University of Nairobi in 1982 as a Tutorial Fellow in the Department of Pharmacy where she rose to the position of full Lecturer in 1984 and Senior Lecturer in 1988. Professor Guantai has a wealth of teaching, supervisory and administrative experience. She is currently the Associate Dean, Faculty of Medicine and Chairman, Department of Pharmacy. She has attended many conferences, symposia, workshops and seminars both locally and internationally.

Her research activities include phytochemical and pharmacological/Biological study of traditional herbal medicines in Kenya with regard to relevant therapeutic activity, evaluation of the toxicology of 'Miti ni Dawa', Investigation of the toxicological activity of synthetic Steroidal indoxyls and indoles, evaluation of the anti malarial activity of Kenyan Floral (*Ajuga*, *Warbugia*, *Artemisia Afra*) and many others. Professor Guantai has 23 publications in referred journals.

Professor Laban J. Ogallo has been appointed on promotion as full professor in the department of Meteorology.

Professor Ogallo obtained a B.Sc. and M.Sc. in 1975 and 1977 and Ph.D 1979 respectively from the University of Nairobi.

Professor Ogallo has a wealth of experience in research and teaching in his area of specialization i.e. climate dynamics, remote sensing, forecasting, Hydrometeorology climate change and impacts. He is a member of many International organizations. He has supervised 21 M.Sc. and 18 Ph.D students. His current research projects in collaboration with other researchers include, (i) Climate Atlas of Africa and; (ii) Analysis and Climate model simulation of recent droughts over Kenya, Tanzania, Malawi and Zimbabwe. Professor Ogallo has attended and participated in many International conferences, Seminars and Workshops. Professor Ogallo has 61 publications in referred journals an equal number of conference papers. He is currently the secretary, Kenya National Council of Science and Technology.

Dr. Gilbert Onyango Kokwaro has been appointed on promotion as an Associate Professor in the Department of Pharmacy.

Professor Onyango Kokwaro obtained his B. Pharm. and M.Sc. degree from the University of Nairobi in 1978 and 1982 respectively before proceeding to University of Wales, U.K. where he obtained Ph.D in 1987.

Professor Kokwaro joined the University of Nairobi in 1982 as a Tutorial fellow in the department of Pharmacy. He rose to the position of Lecturer and Senior Lecturer in the same department in 1984 and 1990 respectively.

Professor Kokwaro has attended various courses in Chemical and Clinical Pharmacology and drug metabolism. His area of specialization covers, Biopharmacokinetics, drug metabolism, clinical and biochemical Pharmacology. His current research is on:

- (i) Effects of Malaria infection on drug disposition in African Children (Research being carried out at Kilifi District hospital, Coast province, Kenya).
- (ii) Effects of infection and fever on activities of selected isozymes of Lytochrome p-450 enzymes.

Professor Kokwaro has attended and participated in many conferences, both locally and internationally. Professor Kokwaro has more than twenty (20) papers in referred journals.

Dr. Catherine K. M. Masinde has been appointed on promotion as a senior lecturer

in the Department of business Administration. Dr. Masinde graduated with a B.Ed. (Hons) Business Studies from Kenyatta University College, Nairobi in 1981. In 1986, she completed her M.B.A. from the University of Nairobi. She received her Ph.D in June 1994.

Dr. Masinde joined the University service as a Lecturer in 1987 in the Department of Business Administration. Her major research interests are in small business promotion and developments besides her teaching duties. Dr. Masinde has published considerably in her area of specialization.

Dr. Isaac Meroka Mbeche has been appointed on promotion as a Senior Lecturer in the Department of Management Science.

Dr. Mbeche holds a Bachelor of Education (Science), 1977 and a master of Arts 1979 from University of Nairobi. In 1993, he obtained his Ph.D (management Science) from University of Lancaster. He joined the University of Nairobi in 1986 as a tutorial fellow and was promoted to the post of Lecturer in 1987.

Dr. Mbeche's current research interests are on the promotion of community based approach to planning implementing and controlling of rural Development projects and the investigation of opportunities to apply management science concepts and principles to the efficient management of development projects in Kenya. Dr. Mbeche has been involved in major consultancies in Kenya and has supervised a number of postgraduate students in the area of Business Management.

Mr. John K.A. Kenduiwo has been appointed on promotion as a Senior Lecturer in the Department of Management Science.

Mr. Kenduiwo has a B.Sc. (Mechanical Engineering) and MBA obtained in 1981 and 1988 respectively from the University of Nairobi. Mr. Kenduiwo has supervised a number of MBA students.

Dr. Evans Aosa has been appointed on promotion as Senior Lecturer in the Department of Business Administration.

Dr. Aosa graduated with a B. Com. (Business Administration) from the University of Nairobi in 1983 in 1984, he proceeded to Catholic University of Leuven (Belgium) where he obtained an MBA. He received his Ph.D from University of Strathclyde (UK) in 1992. He has seven publications in referred journals, and a number of unpublished work. He has been involved in supervision of seven (7) students in various research projects for MBA degrees.

Dr. Isaac Ongubo Kibwage has been appointed on promotion as an Associate Professor in the Department of Pharmacy.

Professor Kibwage obtained a Bachelor of Pharmacy degree from the University of Nairobi in 1979. He proceeded to Belgium for his postgraduate studies and obtained a master of pharmaceutical Sciences (Pharm. Anal) and Doctor of Pharmaceutical Science (Pharm. Chem) from Katholieke Universitet Leuven, Belgium, in 1982 and 1985 respectively.

Professor Kibwage joined the University in 1985 as a lecturer in the department of Pharmaceutical and Pharmacy. He rose to the position of Senior Lecturer in 1991. His research experience and interests are in Pharmaceutical products surveillance. Evaluation of quality, Disposition of analytical methods and their applications in biomedical, pharmaceutical and drug analysis, Isolation and characterisation of new compounds and synthesis of impurities. Professor Kibwage has brought in equipment used for teaching and research including books. He has supervised students at masters and doctorate levels.

Professor Kibwage has attended and presented papers at many international and local conferences. He has 26 papers in referred journals.

Dr. Kenneth Muema Mavuti has been appointed on promotion as an Associate Professor in the Department of Zoology.

Professor Mavuti obtained his B.Sc. degree in 1973, M.Sc. (Zoology), 1976 and Ph.D (Zoology) 1983 from the University of Nairobi. In 1976, he underwent a training course in Limnology at Limnological Institute, University of Vienna, Austria.

He joined the University of Nairobi in 1977 as a Tutorial Fellow in the department of Zoology rising to the position of lecturer and senior lecturer in 1981 and 1988 respectively. Professor Mavuti has been involved in major consultancies involving both local and international organizations in his area of specialization - Hydrobiology

& Fisheries.

He has supervised a number of M.Sc. and Ph.D students. He has more than 25 papers in referred journals. Professor Mavuti is the current chairman of the Department of Zoology and also chairs the Management Committee of Law of the Sea Project between Gent, Belgium and Nairobi universities.

Dr. J.K.A. Keter has been appointed on promotion as Associate Professor in the Department of Soil Science.

Professor Keter obtained his B.Sc. and M.Sc. degree in 1971 and 1974 from the University of Nairobi. In 1981 he was awarded Ph.D from the University of Florida. He joined the University of Nairobi as a lecturer in the Department of Soil Science in 1975 and was promoted to the post of Senior Lecturer in 1985.

Professor Keter has a wealth of academic and administrative experience. He has been a Hall's Warden, 1985-1992, acting Dean, Faculty of Agriculture 1988-1989 and Director, Nairobi Mircen (Micro biological Resource Centre) 1988-1992. He has supervised 3 Ph.Ds and 8 M.Sc.s.

Professor Keter has 14 papers in referred journals and has edited one book.

Dr. John J. McDermott has been appointed on promotion as a Visiting Senior Lecturer in the Department of Public Health, Pharmacology and Toxicology.

Dr. McDermott obtained his DVM from the University of Guelph, Ontario, Canada in 1981, Master of Preventive Veterinary Medicine (MPVM) from the University of

California in 1985, and Ph.D from University of Guelph, in 1990.

Dr. McDermott joined the University of Nairobi as a Visiting Lecturer in Epidemiology and project coordinator Nairobi-Guelph-CIDA linkage program in Veterinary epidemiology and economics in 1990. He has 19 papers in referred journals. Dr. McDermott has attended many conferences where he has presented papers. He has supervised seven Ph.Ds and ten M.Sc.s. As a visiting Senior lecturer, Dr. McDermott is an Associate Professor of Epidemiology, University of Guelph, Ontario, Canada.

Dr. Moses Nzau Kyule has been appointed on promotion as Senior Lecturer in the Department of Public Health Pharmacology and Toxicology.

Dr. Kyule obtained his BVM and M.Sc. in 1980 and 1984 respectively from the University of Nairobi. In 1986, he was awarded the Degree of Masters of Preventive Veterinary Medicine (MVPM) from the University of California, Davis, U.S.A. where he also obtained Ph.D in 1989.

Dr. Kyule joined the University of Nairobi in 1980 as a Tutorial fellow in the Department of Public Health, Pharmacology and Toxicology. He rose to the post of Assistant lecturer in 1987 and full Lecturer in 1989.

He has supervised nine M.Sc.s and is currently supervising three PhD. and one MSc. student.

Dr. Kyule has nine papers in refereed journals.

Dr. Daniel James Muchiri has been appointed on promotion

as Senior Lecturer in the Department of Public Health Pharmacology and Toxicology.

Dr. Muchiri obtained his BVM, 1975, MSc. 1977 and PhD 1989 respectively all from the University of Nairobi.

He joined the University as an Assistant Lecturer in 1975 and rose to the position of lecturer in 1978.

Dr. Muchiri has supervised two MSc. candidates and is in the process of supervising another five. He has six publications in referred journals. His research interests are in poisonous/ medicinal plants.

Dr. Peter Baaro Gathura has been appointed on promotion as Senior Lecturer in the Department of Public Health Pharmacology and Toxicology.

Dr. Gathura obtained his BVM in 1980 and M.Sc. in 1984 from the University of Nairobi. In 1992, he was awarded Ph.D degree from Hokkaido University, Japan.

He joined the University of Nairobi as a Tutorial Fellow in the Department of Public Health Pharmacology and Toxicology. He was promoted to the post of lecturer.

Dr. Gathura has five publications in referred journals and many others still in the press. Dr. Gathura has supervised a number of masters students. He has attended many conference's both locally and internationally. Dr. Gathura's current research activities are in the areas of:

1. Drinking quality water in Kikuyu Division, Kiambu District and
2. Immunodiagnosis of

hydatid disease in man/ livestock.

Dr. Kefa Verkys Ojwang Rabah has been appointed on promotion as senior lecturer in the Department of Physics.

Dr. Rabah obtained his B.Sc. (Physics) degree from Poona University (India) 1983, and M.Sc. Phys (Mat. Sc.) from S.G. University India in 1985, M.Sc. (Semi conductor Devices) and Ph.D (Physics) from Lancaster University (U.K.) in 1988 and 1991 respectively.

He joined the Department of Physics as an Assistant lecturer in 1986 and rose to the position of Lecturer in 1991.

His current research interests are in Developing new techniques in fabrication, testing and application of semi conductor devices eg. MOSFET and Mos-structurers, bipolar transistors, PV solar cells. and renewable energy projects and green house effects on the global temperatures changes.

Dr. Rabah has 13 papers in referred journals. One registered Research patent "Switching Circuit" United Kingdom patent number GB 2235 102A of February 1991. He has written two text books. He is a Member of the Institute of Physics (IOP), U.K., Associate member of the Institute of Electrical Engineers (IEE), UK, member of the Institute of Electrical and Electronic Engineers (IEEE) U.S.A., ordinary member of the European Physical society (EPS) Dr. Rabah has fair knowledge of French, Italian and Spanish.

Dr. Nimrod J. Mwang'ombe has been appointed on promotion as Senior Lecturer in the Department of Surgery. He

holds an MB.Ch.B. 1976, M. Med. in surgery 1980 Ph.D in Surgical Neuro oncology (1990).

He served UON as Honorary lecturer between 1982-1990 and became a lecturer in 1990. He has also served as W.H.O. consultant in neurosciences since 1991.

He has attended several conferences/seminars abroad and locally and presented papers. His area of specialisation is in neuro surgery where he is also a consultant. He has supervised three post graduate students.

Dr. Ruth W.K. Nduati has been appointed on promotion as Senior Lecturer in the department of Paediatrics. She holds an MB.ChB, M.Med. Paediatrics (1985), Certificate in tropical medicine master of Public Health Paediatrics (1994).

She became a lecturer in 1989. Her area of specialisation is in Epidemiology. She has four publications in referred journals and four book chapters. She has supervised five postgraduate thesis and has been active in the Department's administrative assignments. She is a member of some professional associations. She has research interests in Aids in young children and has taught both undergraduate and post-graduates.

She has attended conferences at local, regional and international forums.

Dr. Eliud N.M. Njagi has been appointed on promotion as senior in the Department of bio-Chemistry. B.Sc. (1983) M.Sc (1987) Ph.D (1990). He joined UON in 1986 as a Demonstrator and became a Graduate Assistant in 1988 and

Tutorial fellow in 1989 and rose to lecturer. He has taught both undergraduates and post graduates.

He is currently supervising three post graduate students. He has six publications in referred journals and is a member of the Biochemical Society of Kenya. He has attended and presented several conference papers at local forums.

Dr. William M. Macharia has been appointed on promotion as senior lecturer in the Department of Paediatrics and child Health. Dr. Macharia obtained his MB.Ch.B. in 1980, M. Med (Paediatrics) in 1986, Tropical medicine (cert) in 1986 Diploma Haematology and Oncology in 1990 M.Sc. (din. Epidemiology) in 1991.

He joined the UON as a lecturer in 1987. His area of specialization is paediatric oncology. He has eight publications in referred journals and has supervised three postgraduate students. Dr. Macharia has been active in Departmental Administrative assignments and has attended a number of conferences at local, regional and international forums. He is a member of several professional associations.

Mr. Alexander M. Mwanthi has been appointed on promotion as senior lecturer in the Department of Community Health. He holds a BSc. 1979, MSc. (environmental Health) 1982 and is currently pursuing a Ph.D. He joined the University as a graduate Research Assistant in 1983.

He has published papers in referred journals and has attended conferences where he

presented papers. He is a member of professional associations and has had several years teaching experience both at UON and the U.S.A.

Dr. Elizabeth N. Ngugi has been appointed on promotion as senior lecturer department of community Health. She holds a B.Sc. (1983), M.A. Nursing (1985), Ph.D in Health Education and counselling (1989). She has served as an honorary lecturer in UON and became a lecturer in 1986 in the Department of Community Health.

She has published extensively in referred journals and is a member of a number of professional associations. She has also attended and presented papers in several conferences locally and internationally.

UNIVERSITY GRANTS SWELL

The University of Nairobi has continued to attract funds for research from many donors. For the financial years 1993/94 alone, the University received over KShs 150 million for research in various fields.

The donors include DAAD, Ford Foundation, Rockefeller Foundation, Sasakawa Foundation, UNEP, SIDA, CIDA, Commonwealth, The Netherlands Government, JSI Research and Training, SAREC, The Israel government, University of Washington, UNESCO, I.A.T.A., Pathfinder, WHO, UNDP, JHPIGO, GIARA, Katholieke Universiteit, University of Ghent Link, KARI, University of Antwerp, FHI, Tammy Smith, World

Bank, FAO, University of Manitoba, African Small Ruminant, CIAT, UNICEF, University of Galway Ireland, USAID, IAEA, Kenya Re, UNPA, UNFPA, African Academy of Sciences, IDRC and many others.

Scholars Disseminate

Mr. Philemon A.O. Akatch of the Department of Linguistics and African Languages travelled to Riyadh, Saudi Arabia and participated in the UNESCO sign Languages project.

Dr. J. Maina Ayuya of Department of Vet. Pathology and Microbiology attended and participated in the Annual workshop of the Ruminant Helminth collaborative Research project at the MS training centre, Arusha, Tanzania.

Dr. Casper Odegi-Awuondo, Department of Sociology, attended and presented a paper in a Rural Development Research Project for the installation of water supplies in Karamoja, Uganda.

Professor Aggrey C. Ackello-Ogutu, Department of Agricultural Economics attended a workshop and presented papers at the International Livestock centre for Africa (ILCA Addis Ababa, Ethiopia).

Professor Judith M. Bahemuka, Department of Sociology travelled to Bangalore, India where she attended and participated at the conference on comparative

Methodologies and Theories Related to Family and gender in Africa.

Mrs. Edith Miguda-Akitch, of Department of History attended and presented a paper at the International Peace Conference held in Malta.

Dr. Gershon N. Amayo, Department of Educational Foundation attended and participated at the International conference of NGOs against Drug Abuse (IEND) in Paris, France.

Mr. Elijah K. Biamah, Department of Agricultural Engineering attended The Food and Agriculture Organization Mission on technical expertise on Soil and Water Management in Yangline, China.

Dr. T.C. Davis, Department of Geology delivered a paper at the third Commonwealth Conference in Hong Kong.

Dr. Katherine W. Getao, Institute of Computer Science attended the International conference on "Information Technology and Socio-Economic Development in Cairo Egypt.

Mr. Samson Okuro Gunga, Department of Educational Foundations attended and presented a paper at the PRAESA conference, University of CapeTown, South Africa.

Dr. George Chege Gitao, Department of Veterinary Pathology and Microbiology presented a paper at the UNESCO Donors conference in Arusha, Tanzania.

Mrs. Juliet N. Gacegoh, Department of educational Communication attended and

presented a paper at the 9th Biennial Conference in Accra, Ghana.

Professor Jameela Hassanali, Department of Human Anatomy attended and participated at the WHO conference on Oral Health Sciences in Geneva, Switzerland.

Mr. Gerrison K. Ikiara, attended and presented a paper at the Oxford conference on Christian Faith and Economics in Agra, India.

Prof. Jasper K. Imungi, Department of Food Technology and Nutrition attended and participated in the "UNMET Training and Research Needs in Nutrition" in Bellagio, Italy.

Dr. Mohamud A. Jama, Institute for Development Studies presented a paper at the Third International Society for Ecological Economics Conference in San Jose, Costa Rica.

Dr. Wanjiku Kabira, travelled to Iran to participate in the training of NGOs working with UNICEF.

Mr. Anthony Muriithi Kinyua, Institute of Nuclear Science attended and participated in the IAEA workshop on Air pollution Monitoring as part of his coordinated research project in Sydney, Australia.

Dr. Paul M. Kimani, Department of Crop science presented a paper at the second International Crop Science Conference for Eastern and Southern Africa, in Zomba, Malawi.

Dr. Nancy Karanja, Dept. of Soil Science, travelled to Milan, Italy, where she attended and participated in a workshop on

organic resource management.

Dr. James H.P. Kahindi, Department of Botany attended and participated in a workshop on Soil Biodiversity and Ecosystem Function in Tropical Agricultural Systems in Hyderabad, India.

Mr. D.H. Kiiru, Department of Literature attended and presented a paper "challenges in the use of information Technology in presenting and Accessing Oral literature in Kenya" at the International conference on Information Technology and socio-economic Development, Cairo, Egypt.

Professor C.N. Karue, Department of Range Management attended and participated in a workshop, Camels and Dromedaries as Dairy Animals" in Nautchokor, Mauritania.

Daniel M. Maina, Institute of Nuclear Science attended and participated in a Workshop "Adoption and Harmonization of Safely Regulations Radioactive waste Management" in Accra, Ghana.

Prof. Richard W. Mwangi of the Department of Zoology attended a conference on New strategies for locust control in Bamako, Mali.

Mrs. Dorothy Achieng Omollo-Odhiambo, Department of Linguistics and African Languages presented a paper at the 2nd International conference on Home and Community care of persons living with H.I.V./AID in Montreal, Canada.

Launching

The Vice-Chancellor, Prof. Francis J. Gichaga launched two book titles.

1. Philosophy, Humanity and Ecology;
2. Philosophical Focus on culture and traditional thought system in Development. The books were written by two senior scholars of the University.

The Vice-Chancellor said he was proud to present the two Books, one, Edited by Professor J.M. Nyasani Principal, college of Humanities and Social Sciences, and another by Professor Odera-Oruka of the Department of Philosophy. Both he said were reknown scholars and philosophers of our time. He commended the efforts of the two. "As academics we have the responsibility of not only advancing knowledge but more importantly influencing opinion and the course of national development." He said.

"The obligation to publish is particularly crucial to a fast developing country such as Kenya. Today's launching fulfills our corporate mission i.e. to participate in the discovery, transmission and preservation of knowledge." He added.

The Vice Chancellor reminded the academicians that they had a duty to share what they had achieved and can only do so through dissemination such as writing of books. "

The books are a culmination of concerted efforts over a period

of years by the respective authors and the publishers. Professor Nyasani has published widely in the fields of metaphysics, logic and African Philosophy while Professor Odera is reknown for his contribution in ethics, and African Philosophy. He initiated a now famous academic line of research, the *Sage Philosophy*

The Vice-Chancellor commended The African Center for Technology Studies, (ACTS) and the African Academy of Sciences (AAS) for role in the production of the new title "Philosophy, Humanity and Ecology," Volume I of the same which deals with "Philosophy of Nature and Environmental Ethics."

The book comprises a series of research papers presented at the 1991 World conference of Philosophy, held at the Kenyatta International Conference Centre and which was opened by the Vice President Professor George Saitoti. It includes Professor Odera's own paper "Ecophilosophy and Parental Ethics," it also includes Prof. Nyasani's paper "The Anti-theoretical ~equal in the African Pergonalitieff." Many world reknown names can be read in the table of contents.

He thanked the **Kourad Adenauer Stifling**, for helping in the publication of the book entitled "Philosophical Focus on Culture and Traditional Thought systems in Development" where Prof. Nyasani compiles a contribution by different authors, it is in effect

a multi-disciplinary publication which is the fruit of a philosophy conference held in Mombasa's Inter-continental Hotel in May, 1986. Prof. Oruka was chairman of the conference. The Book does have each contributors paper in its original language, a tribute to Prof. Nyasani's multi-lingual capabilities. Here we find, in the table of contents, besides contributions of Prof. Nyasani under the title "The role of Culture and Traditional Thought System in Development," a surprising number of African Intellectuals, among them, prominent Philosophers of the African continent like Prof. Candi Summer of Ethiopia and Prof. Ernest Wambaa-Dia-Wamba just to mention two. From our own department of Philosophy, Dr. S. Monyenye and Dr. N.W. Nabakwe have made significant contributions including the former Chairman, Dr. Wanjohi.

He concluded by challenging all academic staff to write relevant books for use in our Universities in Kenya and the region in general.

BOOK REVIEW

Real Estate Valuation Handbook: With Special Reference to Kenya

Land and Economics, the discipline which houses the profession of valuation, uses mainly the principles of economics and law into an intellectual framework that provides the basis for investigating and analysing the development, management, use and disposal of interests in Real Estate.

Valuation is the art and science of determining, using documented and undocumented factual evidence the value of some Real Estate for a particular purpose, at a particular time and within a particular geographical location and user category. Other than the statute directed valuations, the key component and approach to any valuation exercise has as its primary test, the achievement of an "open market value" often defined as the most probable price in cash as at the date indicated for which the valued property will sell in a competitive market under all conditions requisite to a fair sale with the buyer and seller, each acting prudently and knowledgeably, neither being under any undue influence or duress.

What is transacted in the market are the legal rights or interests quite apart from the physical soil or buildings. These legal rights are principally freeholds, leaseholds and group ownership's which occur in urban, rural and special purpose Real Estate.

However, hardly are any of these interests absolute, they are often controlled by overriding factors that are noted in sections 27-30 of the Registered Land Act chapter 300 of the laws of Kenya, land use and planning legislation, in addition to some common and accepted community practices.

These various interests are examined in chapter 1 of Paul Syagga's book. This chapter underscores the absolute importance of effecting an official search by anyone who wants to determine the nature and extent of some interest in

registered land or Real Estate which explains the significance of land registration in Kenya. that is currently being pursued as official, Government land policy. Land registration then is the king pin of modern land transaction as we know it today. Records are established and transactions are noted and updated.

It is the duty of the valuer to assess the supply and demand for various landed estates within the context of the existing interests/rights in the same. The interplay of the market forces underscores the significance of Real Estate as an investment. However, Real Estate has some characteristics which have to be recognised and taken into account when treating it as an investment and especially when comparing it with other forms of investments. These include fixity in location, heterogeneity, large capital investments, liquidity and management requirements. These qualities have a bearing in the decision making criteria by potential investors.

The fact that Real Estate largely enjoys security of capital, is a hedge against inflation and gives pride of ownership sometimes makes it more attractive than other investments, say in bonds, stocks and shares, savings and insurance links. Once a Real Estate investment decision is made, it is then the duty of the valuer to turn the net income stream that accrues from the property into a capital sum or valuer using the investment formulae. The rationale behind such formulae and the calculations thereof are the burden of Paul Syagga's chapter two.

These formulae are then used in the various methods of valuation as dictated by the purpose of the valuation. Basically five main methods of valuation are discussed in chapter three. These are the most commonly used, namely comparative sales, income capitalisation, cost reinstatement, profits and residual. Each of these methods is adequately explained in the book using simplified examples. Except for some few errors in the calculations, these examples are useful for the purpose of amplifying the explanations given.

Most of the investment valuations are underpinned by the famous economic principle of time-value-of money. A shilling invested at compound interests rate today is worth more than a shilling next year.

Valuation tables have been computed from the arithmetic based on the compound interest and present value principles. These are adequately explained in chapter four. The computed figures in the tables are valuable for calculating the capital values of freehold interests and those of leasehold interests. Some valuation methods however are dictated by the requirements of certain statutes. The valuer bases his approach, analysis and conclusions on the stipulations laid down by the law quite apart from, or in addition to what the market conditions dictate. These are valuations under the Rent control legislation, taxation duties, Rating and condemnation. A good grasp of the Real Estate law is a prerequisite for any

valuer. For other valuations, the basic principles are not governed by legislation. These are non-statutory assessments where, in most cases, the conventional valuation methods apply. Such valuations include mortgage, development properties, insurance, auctions, shares, subdivisions etc.

These are explained, with appropriate examples in chapters six and seven where the different methods of valuing special properties (petrol stations, cinemas and hotels and restaurants) are discussed.

Agricultural Real Estate includes farms, farm infrastructure and equipments, non-precious minerals and forests. The reasons and methods are modified or differ from the methods used in Urban Real Estate valuation and are discussed in chapters nine (9) through to eleven (11). Local examples of how such valuations are effected are given before the salient features of report writing (as a significant aspect of a valuer's work) are discussed in the final chapter (twelve 12).

Professor Syagga's book will be most useful to the final year university students and to valuation professionals in the field.

For the first time, we have a book of valuation written by a Kenyan professional of long standing. The book's greatest strength is the incorporation of local statutes to the valuation literature where they are most applicable. In addition, local examples are used to explain the principles of valuation which for a long time have appeared foreign to

a student coming into valuation for the first time.

Hitherto, students and lecturers of valuation were faced with the problem of fitting local legislative frameworks into valuation models and methods that were almost invariably developed - country oriented. Before the publication of this book, practically all the books used for teaching and understanding valuation were written either in Britain or in the United States exclusively for their circumstance.

Professor Syagga's book has gone along way in bridging the gap between Real Estate valuation principles developed abroad and local circumstances prevailing in Kenya. The language used is clear and simple to comprehend and it should be a must reading for final year students of valuation, lecturers and professional valuers.

Human Papilloma Virus and Cervical Cancer in Kenya: Epidemiology, Prevention and Control

This is a relatively thin volume of 120 pages which is essentially a collection of topics dealing with dysplasia and Cancer of Cervix in Kenya. It was originally meant to be the proceedings of a symposium held in Naivasha in February, 1994 dealing with the above subject with emphasis on viral carcinogenesis. However, because cancer of the cervix is the number one cancer killer of women in tropical Africa the editors chose to widen the scope and offer more information to the public.

This book is an outcome of collaboration between two

departments. The Department of Epidemiology and Community Medicine (Antwerp) and the Department of Human Pathology (Nairobi) through the principal investigators, Prof. Meheus and Dr. Nyong'o respectively. They conducted a 3 year study beginning 1991 in the Nairobi City Clinics, Kiambu District Hospital, Machakos, Kisumu and Migori hospitals. The study brought out an enormous body of knowledge and identified numerous problems in the area of screening for cancer of the cervix (which is the only way this disease can be controlled). Their findings have been published in reputable journals. These publications are also included in this book.

The book is divided into eleven chapters. The first chapter is written by Professor Mati (formerly of the University of Nairobi) and deals with historical, current and future perspective of research in cervical cancer in Kenya. This is a vital reading for any researcher in cancer in Kenya. The second chapter covers the epidemiology of HPV infection and its relationship to Cancer of Cervix. It is written by Professor Meheus.

Since HPV is a human virus, it is also an etiologic agent in other human diseases. Dr. Okoth-Olende writes a chapter on Laryngeal Papillomas and HPV. Dr. Nyong'o reviews their work in Nairobi regarding Dysplasia and described the early days of the collaborations. This is a very interesting chapter of the book because it shows how good science depends on good people meeting at times by chance and then persistence and endurance

becomes the substance of continuity. Collaboration is a must in present day research. The fifth chapter is written by Dr. Tukei of KEMRI on Polymerase Chain Reaction, a very sensitive technique of detecting viruses in the body. Good research depends on good and reliable techniques. This 'high-tech' instrument is now available at KEMRI and the department of Biochemistry, University of Nairobi. Those interested in PCR will be happy to know that we no longer depend on foreign experts.

There is a Chapter by Dr. Jura of ICIPE dealing with an insect virus which is used for control of Tse-Tse flies. This is a novel idea which is probably useful for the students interested in 'Control-Medicine'. Dr. Katini-Ombaka writes the tenth chapter on Socio-economic issues of Cancer Screening. She terms cervical cancer as another poor woman's disease. This Chapter gives us a rude awakening regarding cancer screening problems. It must be read by all policy makers.

Prof. Penner's Chapter (eleventh) turns our attention to training of cytotechnologists and pathologists. Without manpower nothing can be done. The final Chapter deals with operational issues. Dr. Sebrecht takes us to the trenches and some of the trenches are indeed treacherous. Her experience is based on the Dysplasia Study. This book has everything for everybody. This book is jointly Published by the Dept. of Epidemiology, University of Antwerp and the Department of Human Pathology,

University of Nairobi. It is edited by Dr. Aggrey Nyong'o Cchairman, Department of Human Pathology and Prof. A. Meheus. It is distributed by the University Bookshop and Textbook Centre at Ksh.600/-

This book will be used for many years to come as a very necessary handbook for researchers and clinicians.

Sabbatical Leave

Prof. Clement M.O. Oniang'o
Dean, Faculty of Social Sciences

D.W. Waruta, Snr. Lecturer
Religious Studies

Prof. Osaga Odak, Professor
Institute African Studies

Dr. Samuel M. Arimi, Snr.
Lecturer Public Health

Dr. Johnson K. Ndele, Snr.
Lecturer Dept. of
Clinical Pharmacology

Prof. Shem O. Wandiga, Dept.
of Chemistry

Dr. J.M. Maribei, Snr. Lecturer
Dept. of Clinical Studies

Prof. G.B.A. Okello, Professor,
Dept. of Medicine

Mr. Smokin C. Wanjala,
Lecurer Dept. of
Commercial Law

Prof. Kivutha Kibwana, Assoc.
Professor, Private Law

Dr. Patts M.A. Odira, Snr.
Lecture Civil Engineering

Mr. D.M. Wanjau, Lecturer
Civil Engineering

Dr. Lawrence Gumbe, Snr.
Lecturer, Agricultural
Engineering

Prof. Donald A.O. Orinda,
Assoc. Professor Clinical
Chemistry

Mrs. Rosemary Kiathe, Librarian,
Library

Staff on Study Leave

Mr. P. Kiplagat, Graduate Assistant, in the Department of Public Law was granted study leave from 1/6/94 upto 30/5/95 to enable him travel to Yale University to complete his Ph.D studies.

Mr. G.E. Onyulo, A Technologist in the Department of Agricultural Engineering was granted study leave from 1/6/94 upto 31/5/95 to enable him do B.Sc. degree at the Utah State University, U.S.A. under the sponsorship of SAREC.

Mr. P.N. Mugo, Senior Technician, Science Workshop was granted study leave from 30/9/94 upto 1/10/95 to enable him do a Diploma Course in Glass Blowing at the University of Greenwich, Britain under the sponsorship of World Bank.

Mr. D.M. Kyule, Tutorial Fellow, in the Department of History was granted study leave from 29/8/94 upto 28/8/95 to enable him pursue Ph.D studies at the University of Illinois, U.S.A. under the scholarship of the same University.

Mr. J. Musalia, Tutorial Fellow in the Department of Sociology was granted study leave from 11/7/94 upto 10/7/95 to enable him do Ph.D studies at the Indiana University,

U.S.A. under the UoN/ Indiana University Exchange Program.

Mr. F.C. Fernandes, Lecturer, Department of Management Science was study leave from 15/7/94 upto 14/7/95 to do Ph.D studies at the Arkansas State University under a Fulbright Scholarship.

Mr. D.K. Irurah, A Lecturer, in the Department of Architecture was granted study leave from 15/8/95 to enable him do Ph.D studies at the University of Pretoria under the sponsorship of the same University.

Dr. M. Mutunga, Lecturer, in the Department of Clinical Studies was granted study leave from 1/10/94 upto 30/9/95 to enable her carry out research for her Ph.D under Commonwealth Scholarship.

Dr. S.O. Ogendo, Lecturer, in the Department of Surgery was granted study leave from 23/7/94 upto 22/7/95 to take up a Trainee Post at the Queen Elizabeth Hospital, U.K. under the Overseas Doctors Training Scheme scholarship.

Mr. J.K. Maalu, A lecturer in the Department of Business Studies was granted study leave from 1/5/94 upto 30/10/95 to enable him do a research on Entrepreneurship at the Warton Business School, U.S.A. under USAID.

Mr. R.E.A. Koola, A Lecturer in the Department of Meteorology

was granted study leave from 29/11/94 upto 24th/11/95 to enable him carry out research for his Ph.D at the Bureau of the Meteorological Research Centre, Australia under the sponsorship of the World Meteorological Organisation, Geneva.

Dr. F.M. Kitala, A Lecturer, in the Department of Public Health, Pharm. and Toxicology was granted study leave from 22/6/94 upto 30/4/95 to enable him do a course in Advanced Epidemiology at the University of Guelph, Canada under CIDA.

Dr. J.M. Nasio, A Project Doctor in the Department of Microbiology was granted study from 2/9/94 upto 1/7/95 to do a Masters degree in Epidemiology at the University of Washington under the sponsorship of the same University.

Mr. A.H.T. Mwasela, A Technician in the Department of Vet. anatomy was granted study leave from 1/10/94 upto 1/4/95 to do Anatomical Illustrative Photography at the University of Staffordshire, U.K. under the sponsorship of World Bank.

Dr. G.J. Magutu, A Senior Lecturer, in the Department of Architecture was granted study leave from 1/1/94 upto 31/7/95 to enable him take an academic Staff Fellowship at the University of Newcastle Upon Tyne under the

sponsorship of the Commonwealth Scholarship Commission.

Mr. H.A. Lusisa, A Senior Technologist in H.R.D.U. was granted study leave from 1/9/94 upto 31/8/95 to do a Masters Degree at the Catholic University, Leuven, under the sponsorship of the Belgium Government.

Mr. H.F.A. Kaburia, A Chief Technologist in the Department of Public Health, Pharm. and Toxicology was granted study leave from 26/9/94 upto 30/9/95 to do an Advanced Course in Medical genetics and Immunology at the Brunei University, UK. under the sponsorship of World Bank.

Miss M. Omosa, A Lecturer in I.D.S. was granted study leave from 1/10/94 upto 30/9/95 to pursue Ph.D studies at the Wageningen Agricultural University under the World Bank Graduate Scholarship.

Mr. J.M. Mwabor, A Tutorial Fellow in the Department of Physics was granted study leave from 5/11/94 upto 4/11/95 to do Ph.D studies at the University of Dar-es-Salaam under the sponsorship of the African Network of Scientific and Technological Institutions.

Mrs. H. Kidombo, A Senior Administrative Assistant in the College of Education and External Studies was granted study leave from 1/10/94 upto 30/9/95 to do M.Sc. in Human Resource

Development at the University of Manchester, U.K. under the sponsorship of World Bank.

Mr. Gregory K. Katiku, A Senior Technician in the Department of Chemistry travelled to the University of Salford, U.K. to undertake an advanced training on operation, maintenance and repair of modern chemical instrumentation. His training is under the World Bank Staff Development program.

Mr. Simon Mwaura Karugu, Department of Physics Underwent a four months training at the Bhabha Atomic Energy Centre, Bombay, India. He was sponsored by the International Energy Centre.

Mr. George Njomo Karuku, Department of Soil Science attended an advanced course on irrigation and Soil Management at the Volcanic Centre, Israel.

Games

Mr. John Njuguna Ngugi, the University of Nairobi Games Tutor recently returned from a 5 months study leave in Germany.

Mr. Ngugi was at Leipzig University where he underwent a rigorous course in Volleyball coaching which involved, among other subjects, volleyball theory and practical, sciences of training and movements, sports

biology, sports massage, sports pedagogy, sports psychology and German Language. His successful completion, makes him a registered international coach in volleyball.

TRANSITION

The year 1995 has been a very sad one. During this period, the University of Nairobi lost a number of prominent scholars through various ailments.

The Late Professor Edward George Kasili who died on 26.12.94 was born on 9th June, 1942, Professor Edward Kasili went through Namilama and Chwele Primary Schools before Jo Kamusinga High School in 1957 for his secondary school education. He passed the 'O' level Cambridge University examination in 1960 with 12 points and proceeded to Alliance High School where he cleared the A-Level Cambridge Higher School Certificate examination with three Principles and a distinction in Biology. While still at the Alliance he won the Swynerton Burt Prize for a dissertation on *Imperata cylindrica*!

After High School, he joined the University of East Africa at Makerere for the MBChB course which he obtained in March 1968.

He did his internship at the Kenyatta National Hospital for one year between 1968 and 1969. Immediately after that he worked as Registrar in Laboratory Medicine at the Medical Research Laboratory in Nairobi, Kenya. In that capacity he was additionally responsible for lecturing undergraduate medical

students in Haematology, at the Faculty of Medicine. In 1970, he joined the department of Pathology as a lecturer. From there on, Edward's academic career took off to a very solid and steady tempo.

Fellowship

In 1973 he won a World Health Organization (WHO) Fellowship to undertake studies for a higher degree in Pathology in Glasgow, U.K. which he completed and returned promptly in 1975 to continue as Lecturer in Haematology in the Department of Pathology which was still one large composite Department.

Within the same year he was promoted to be a Senior Lecturer. On 3rd May 1979, he was promoted to the rank of Associate Professor.

In June 1980 Professor Kasili was awarded the M.D. degree of the University of Nairobi for his thesis on "Leukaemia in Kenya". In February 1986 he became the first Kenyan to be awarded Fellowship of the Royal College of Pathologists (FRC Path.) on promotion from MRC Path. In November 1986 he was promoted to the rank of Professor of Haematology in the Department of Human Pathology.

From those early and very well targetted achievements Professor Kasili focussed his attention towards promotion of teaching and service.

He was appointed Chairman, Department of Human Pathology from 14th May 1989 up to 13th May 1992. Before the expiry of his tenure, he became

the founder Chairman of the new Department of Haematology & Blood Transfusion with effect from 1st November 1990 upto 31st October 1993. He was promptly re-appointed to continue as Chairman of that Department on 18th October for a further period of three years upto 31st October 1996.

From the Faculty of Medicine and College of Health Sciences, he served in various key capacities, as follows:-

1. Faculty Representative to the University of Nairobi Board of Postgraduate Studies.
2. College Representative to the University Council.
3. A member of the Faculty Editorial Board.
4. Served on many Faculty, College and University Committees by virtue of being Chairman of a department otherwise by direct appointment.

Beyond the University of Nairobi, he served in the Inter-University Council of East Africa, was appointed a consultant to the Commonwealth Secretariat on Safe Blood and Blood Products, served as a WHO consultant and was appointed - Visiting Professor to the University of Manitoba, Canada among many other roles. He served with distinction as the Editor-in-Chief of the East African Medical Journal.

As an innovator with an everlasting penchant for pioneering work, Edward was the force behind the Children's Oncology Ward at the Kenyatta National Hospital. The Nairobi Terminal Care Center and the

Nairobi Hospice Charitable Trust where, like a two-in-one, brainchild of his, they stand as a permanent edifice of his genius, energy and determination within the KNH complex.

Professor Edward George Kasili was a Pathologist who harnessed and nursed the specialty of Haematology into a full-fledged department now run largely by his trainees. He believed very tenaciously and practised the principle that pathology and haematology made sense only in a clinical setting. From the laboratory benches, he did regular ward rounds and made haematology and Blood Transfusion a darling and an envy department in one breath to all other departments in the Faculty of Medicine, especially the clinical departments.

Professor Edward Kasili attended innumerable international congresses both by invitation and for direct original contribution of scientific papers. Equally many are his publications which include departmental teaching manuals.

He did all these things in his profession and career without neglecting his family. He stands out as a humble family man who did what he had to do at home and at work, all the time with distinction. He was the pride of his departments, the Faculty of Medicine, the College of Health Sciences and, indeed, the entire University of Nairobi. Above all he bore his terminal illness with rare equanimity and continued with his work as if all was normal. A very rare man. May the Almighty God rest his soul in Eternal Peace.

A TRIBUTE TO THE LATE PROF. MORRIS SIKA ALALA

**Professor of Mathematics,
University of Nairobi**

The late Professor Morris Sika Alala joined the Mathematics Department of the then Royal Technical College, as an Assistant Lecturer, in September, 1958. The only other African Lecturer at the time was Dr. Julius Gikonyo Kiano, in Economics. Mr. Alala had come from Kakamega Secondary School where he had taught from the previous year, after obtaining his MA in Mathematics at St. Andrews.

In 1960 Mr. Alala was promoted to Lecturer in Mathematics. This was followed, in the next few years, by visits overseas for further training. The first visit was in 1963 when he went to England with his family for a 3 month visit. We understand it was the usual practice at the time for the college to send staff and their families on visits to England. The visit to England was followed by a 3 month stay in Oregon State University, United States, where Mr. Alala attended a Summer Course on Differential Equations, through the sponsorship the Nuffield Science Foundation. The second overseas visit took place in 1965 when Mr. Alala obtained a Rockefeller Foundation scholarship to study for an M.Sc in Differential Equations at Glasgow University under the supervision of the famous Professor I.N. Sweddon.

In 1966 Mr. Alala returned to the college, now called the University College Nairobi, a constituent college of the University of East Africa. By this time Mr. Alala had attracted

the attention of college authorities because he was promoted to be a Senior Lecturer the same year and was appointed the Chairman of the Department of Mathematics in 1967 to replace the eminent Professor H.W. Alexander. He was the first Kenyan and African Chairman of the Department of Mathematics at the College. At that time there were only two African teaching staff in the Department - the other was Mr. Edward Kizza who took early retirement a few years ago and is now teaching in Makerere University.

For the next few years Mr. Alala quietly and with dedication carried out his teaching and administrative duties in the Mathematics Department. But he apparently had ambitions to enhance his mathematical knowledge. He was awarded a Rockefeller Scholarship to return to Glasgow University to study for a Ph.D under Professor Sweddon. He went in 1970, stayed for two years and returned in 1972 to write his thesis. On his return he was promoted to Professor of Mathematics in October, 1972 and thus became the first Kenyan and African full Professor of Mathematics in Kenya.

During the next one year Professor Alala worked hard to complete his Ph.D thesis entitled "The Derivation and Solution of the Modified Hodgkin - Huxley Differential Equations". The differential equations in question govern the conduction of impulses across nerves. The original work by Drs. Hodgkin and Huxley had led to their being awarded a Nobel prize in Physiology and Medicine in

1963. In October, 1973 Professor Alala took leave from the University College to submit his Ph.D thesis for examination at Glasgow University. The panel consisted of Physiologists and Mathematicians. The physiologists questioned how realistically the modified equations represented the biological phenomenon of nerve impulses. Here was an individual, from Africa for that matter, challenging work which had led to a Nobel Prize. In 1974 it was communicated to Professor Alala that certain extensive revision required to be undertaken before a Ph.D could be awarded. There is no doubt Professor Alala was dismayed, puzzled and angered by the intensity of the criticism against his work. He never got around to undertaking the revision and so was not awarded a Ph.D. We sometimes wonder what impact Professor Alala's thesis would have made on the theory of nerve impulses if he had proceeded to carry out the recommended revisions. Perhaps posterity will answer that question.

Evidently Professor Alala by now had his eyes on other opportunities outside mathematics. In 1976 he was elected the Dean of the Faculty Science, a position he concurrently held with the Chairmanship of the Department of Mathematics. However, on his re-election as Dean, in 1978, he relinquished the position of Chairman of the Department to (Hon.) Professor George Saitoti. Professor Alala's term as Dean of the Faculty of Science came to an end in 1980 and a few years later, he was elected Chairman of the Senior Common Room,

which caters for Staff Welfare and provides an atmosphere for the interaction of staff.

Retirement

Professor Alala continued with his teaching duties and retired in 1985, having reached the age of 60 years. The Department of Mathematics organized a one-day symposium in his honour to mark his retirement. The University re-engaged Professor Alala on contract, a position he still held when he tragically passed away on 7th January, 1995.

During his long career at the University of Nairobi, and its predecessor colleges, Professor Alala taught a large number of students who passed through the Department of mathematics and, particularly in the early years, through the Faculty of Engineering. Many of his students have risen to achieve positions of prominence in society and these include, for example, Professor Francis Gichaga, Vice-Chancellor, University of Nairobi, Professor George Eshiwani, Vice-Chancellor, Kenyatta University; Professor Fredrick Onyango, Principal, College of Biological and Physical Sciences, University of Nairobi. At one time or another Professor Alala taught many of the staff in Mathematics Departments in the public universities and he could therefore be truly called the Father, if not Grandfather, of Mathematics in Kenya.

Students remember Professor Alala as the Lecturer who always appeared on time, prepared his lecture notes well and delivered his lectures

clearly and with intensity. He believed in solving many examples and in ensuring that students clearly understood the solutions to all the tutorials he assigned them. In addition he always finished his scheme of work and had ample time for revision. These, as may be recognised, are the secrets for producing good mathematics graduates. Even in recent years, when he was approaching the age of 70, Professor Alala set a good example in the University by participating in many committees, readily accepting duties allocated to him, and marking and processing examinations in time.

Professor Alala's appointment as the first African Chairman of the Department of Mathematics in 1967 had a much greater impact than can readily be discerned. Firstly, his appointment encouraged Africans in Kenya, and surrounding countries, to pursue mathematics as a line of study. Hence from 2 African teaching staff in the Department in 1967 the Department grew to 10 African staff members in 1978 when Professor Alala stopped being Chairman of the Department. Secondly, during Professor Alala's leadership the courses in the Department began to crystallise into the current structure encompassing Pure Mathematics, Applied Mathematics and Statistics. His leadership, as Chairman of the Department, Dean of the Faculty of Science and Chairman of the Senior Common Room, was characterised by smooth, non-controversial administration and involved cordial relations with other staff.

It can be said without fear of contradiction that Professor Alala's life revolved around the Department of Mathematics and the University of Nairobi. He was a humble approachable individual who harboured no malice against others. He got along well with staff and students and interacted freely with colleagues some of who were less than half his age. He did not seek publicity for himself and consequently he shied away from public figures and public appointments; instead, he preferred to live a simple, straightforward life. The simplicity in his approach to life may have been influenced by his mathematical philosophy, namely if there is a solution to a mathematical problem then every effort must be made to seek a simple solution.

Occasionally Professor Alala was regarded as the typical absent minded Professor. A story is told of the time, a number of years back, when Professor Alala could not remember where he had parked his car in Nairobi and proceeded to report to the police that his car had been stolen. After a frantic search by police for a few days, Professor Alala's car was found in a parking bay in town, with a number of parking tickets on the windscreen.

Professor Alala was a brilliant mathematician and a dedicated teacher who devoted his life to the service of the University. He will be dearly missed.

May God rest his soul in Eternal Peace.

LATE PROF. STANLEY MBAKA MBIUKI

Stanley Mbaka Mbiuki was born on August 14th, 1949 being the first born of Mr. and Mrs. Isaiah Mbiuki Ichogia.

His early education was at Chera Primary School (1957-64), Chuka High School (1965-68) and Nyeri High School (1969-70).

He enrolled as an undergraduate student in the University of Nairobi in 1971 and graduated with bachelor of Veterinary Medicine degree in 1975. He was employed by the University soon after his graduation as an Assistant Lecturer in the Department of Clinical Studies. He later proceeded to the United States of America for post-graduate training and was awarded a Master of Science degree in Veterinary Surgery by Colorado State University in 1977.

On his return to Kenya, Prof. Mbiuki was appointed Lecturer in Veterinary surgery in 1978. In addition to teaching duties, he carried out research which culminated in his being awarded, a doctorate of Philosophy by the University of Nairobi in 1985. He was promoted in the same year to the post of Senior Lecturer.

Prof. Mbiuki was promoted to the post of Associate Professor in 1988 and appointed Chairman, Department of Clinical Studies in September, 1990 a position he held up to his demise. In recognition to his immense academic contribution to his area of expertise he was promoted to full professorship of the University of Nairobi in 1994.

Throughout his twenty years as an academician in the University, Prof. Mbiuki was respected by his students and colleagues for his scholarly excellence. This quality was also recognised outside the country as illustrated by his appointment as a visiting professor, Sokoine University of Agriculture, Tanzania and as an external examiner in the same University as well as in Makerere University, Uganda.

Prof. Mbiuki has supervised many post graduate students both at Masters and Ph.D levels. He was a prolific writer and is credited with authoring or co-authoring many publications in the area of Veterinary Medicine.

In addition to being the Chairman of Department of Clinical Studies he served in many committees in the Faculty of Veterinary Medicine, the College of Agriculture and Veterinary Sciences, and the University in general. He will be long remembered for his tireless efforts in undertaking all his responsibilities with dedication.

Prof. Mbiuki was married to Jedline Mwonge and they were blessed with five children two sons and three daughters, Karimi, Nyaga, Kathomi, Kawira and Kinyua.

Prof. Mbiuki was taken sick on the morning of Friday, 3rd February 1995 and admitted to Nairobi Hospital. Despite the dedicated attention given, his condition continued to deteriorate and he passed away on Friday 17th February, 1995 at around 1 P.M.

For us who had the honour of knowing Prof. Mbiuki, his demise was a big blow to us all.

We will miss him dearly and the memories of our life together will always be in our hearts.

UNIVERSITY LOSES ITS COUNCIL CHAIRMAN

The University of Nairobi lost its Council Chairman, the late Dr. Lawrence George Sagini through a road accident. Until his sad demise, the late Dr. Sagini had served the University of Nairobi as a Chairman of the University Council which is the governing body of the University.

As the Chairman of Council, the late Dr. Sagini was also the Chairman of all appointment committees for all full professorships, a responsibility he carried out with utmost dedication; total commitment, transparency and unique efficiency and effectiveness.

The late Dr. Sagini was born on 1st January 1926 at Ikuruma village to the late Ndemo Kibagendi and Mama Esther Nyanganyi Ndemo.

Courage, Principle and above all selfless character was the only identity that could describe his long chequered career in public service right from 1961 when he set foot into politics till his sad demise on 3rd August 1995. Besides his initial involvement in the birth of our country, the late Dr. Sagini continued to serve in many capacities in different sectors - education, industry and politics diligently, blending the past present and the future. Indeed this was a man of vision.

In his condolence to the family, the Vice-Chancellor, Professor

Gichaga described the late Hon. Dr. Sagini as a towering father, a Kenyan, a nationalist who had very intimate knowledge of every part of the country and a philosopher.

At the University, we shall forever remember him for his administrative input that saw us through with the double intake and the decentralization of the University. We shall forever remember his selfless dedication to the welfare and development of the University of Nairobi. To us, The late Hon. Sagini has left behind a legacy to live for ever.

ENTREPRENEURSHIP : THE VARSITY NEW ROLE

Public Universities in Kenya have continued to receive less financial allocations from the Government than their actual estimated expenditure. This has led to underprovision on approved estimates whose net effect has been progressive accumulation of budget deficits.

The Government's intentions is to reduce the education budget from 37% of its annual recurrent budget to about 30%. This is a clean signal that public Universities will continue to receive less financial allocations hence the need to start self sustaining initiatives.

Faced with the above, the University Management Board appointed a committee on income generating Activities in the University. This UMB sub committee was headed by Professor Francis N. Kibera. The committee was tasked "to look into income generating activities in the University and make

recommendations there of" which formed the basis of the following terms of reference:-

- i) To identify and categorise all actual and potential tradeable goods and services within the University of Nairobi;
- ii) To consider ways and means of encouraging members of staff to attract research grants for the mutual benefit of the individual and the University.
- iii) To consider ways and means of developing consultancies and consortia by the University jointly with members of staff;
- iv) Develop appropriate ways and means of developing, management and control systems of the income generating activities;
- v) To review existing remuneration packages for staff involved in income generating activities;
- vi) Consider any other matter related thereto; and
- vii) Make appropriate recommendations.

They examined the existing and potential tradeable goods and services within the University and came up with overwhelming evidence of great potential in terms of income generating activities. The report notes,

"There is no doubt that the University of Nairobi is suitably located; it has physical and human resources; it is endowed with high potential agricultural land; and it has been a leader and centre of

excellence both in East and Central Africa in a number of teaching and research programmes. It is an open secret, therefore, that the University of Nairobi is capable of generating substantial amounts of revenue from the resources at its disposal as well as through collaboration with the private sector in various income generating activities including research."

As a result of this great potential within the University, the committee came up with some of the following recommendations.

1. The University should market more vigorously research and teaching
2. Establishment of idemnity in income generating units.
3. University should establish a more flexible system of disbursement of cash for the purchase of material required by production units.
4. All income generating units should be run on commercial basis.
5. University should ensure that its intellectual property is protected.
6. Better remuneration for successful managers.
7. University explore the possibility of venturing into the export market.
8. University must have qualified Public Relations Officers to create and market a positive image of the University.
9. Establishment of a commercial Pharmacy centre in the Faculty of Pharmacy.

10. Establishment of a medical consultancy
11. Build a teaching Hospital
12. Establishment of part time degree programmes.
13. Faculty of Commerce to establish part time and non-residential MBA and diploma courses.
14. Establishment of a consultancy liason office.
15. Games Department to commercialise all games facilities.
16. Commercialize the operations of petrol stations.
17. To encourage members of staff to attract research grants for the mutual benefit of the individual and the University.
18. Establish of a project office to advise and train members of staff on preparation of fundable research projects.
19. Establishment of an Industrial Liason and Technology Transfer Office to promote contacts between the University and the industry.
20. Establishment of a professional resource centre.

The report added that there is a need for a change in the Universities management style because the entrepreneurial era is a turning point in the development of public universities. the Universities now are called upon to adopt business-like management styles and plan well ahead about resources expected to be forthcoming from the sources other than the exchequer.

INVENTORY OF INCOME GENERATING UNITS

As a result of this new model, the following have been identified as potential income generating units:-

1. Department of Mechanical Engineering
2. Department of Civil Engineering
3. Institute of Nuclear science
4. Department of building Economics
5. Department of electronic and Electrical Engineering
6. Housing and Building Research Institute (HABRI)
7. Department of Urban and Regional Planning (DURP)
8. Department of Land Development
9. Kibwezi Irrigation Project (KIP)
10. Vet. farm - Kabete
11. Coffee Farm - Kabete
12. Horticulture farm Kabete
13. Department of Clinical Studies
14. Department of animal Production
15. Soil Science - MIRCEN Project
16. Department of Food Technology and Nutrition
17. Kibwezi goat project
18. Livestock ranching - Kibwezi
19. Vet. Pathology Laboratory
20. Department of Human Anatomy
21. Computer Science
22. Science Workshop

23. Dental Surgery
24. Department of Medicine and many others.

Income Generating Activities

- 1.0 The University has recently embarked on the income generating activities. In this regard, the University Management Board last year appointed a sub-committee to examine and make recommendations on the various income generating activities at the University.
- 1.1 The Sub-committee compiled a report in which the said recommendations have been made. The report has since been accepted by UMB and Council.
- 1.2. In order to implement these recommendations, UMB has set up an implementation sub-committee with the following terms of reference:
 - a. To work out the modalities of implementing the Income Generating activities Report and to make recommendations thereon to the Board.
 - b. To take stock of the existing income generating units and also to look into the problems they are facing and make recommendations thereon to the Board
 - c. To streamline the schedule for distribution of the net income generated taking into account the views submitted by colleges and the IGUS.
 - d. To make any other appropriate recommendations to the Board.

1.3 The Implementation Sub-Committee on the IGA'S Report has already started its work. So far, it has held many meetings and visited two income generating units, e.g. mortuary and Bookshop.

1.4 During the visits, the sub-committee held discussions with the officials of the units on a range of issues including their general operations, the problems that are being experienced, the units proposed solutions to those problems and their future plans. Reports for submission to UMB have been compiled.

1.5 Other developments aimed at encouraging income generation include the following:

- (a) The creation of an office in the office of the DVC (A&F) headed by a co-ordinator to co-ordinate all matters pertaining to income generation. The office also acts as the secretariat to the UMB Implementation sub-committee on the IGA's Report.
- (b) The University has also revived the extra mural and French programmes for which participants pay a commercial fee.
- (c) The IGA's Report has been circulated to Deans/ Directors, Chairman of the teaching departments and Heads of key Income Generating Units. This is aimed at disseminating information on income generating activities at the University.
- (d) Financial management has been decentralized to the

colleges, nearer to where the IGU's are. This will enable the colleges to make quick decisions on financial matters involving IGUs.

- (e) It has also been discussed and agreed that part of the funds generated by the IGUs should be ploughed back to the units for their future developments
- (f) A special mortgage scheme negotiated with HFCK has been established aimed at boosting staff morale within the spirit of improved income generating activities.
- (g) In SWA, Halls of residence are now hired out to generate revenue. Stella Awinja Hostel is being turned into a Guest House.

Petrol Stations

The two pump stations were commercialised in september last year and good business has been reported.

DFT & N: The Pilot Plant as an Income Generating Unit

The Pilot Plant in this department exists as a laboratory for teaching specific food commodities. In the Plant, the unit operations exist in the food industries for processing meat, milk, starchy root crops and beverages are miniaturized to what is referred to as the semi-industrial scale. It is in the same Plant also that the students are given practical instructions in unit operations in Food Process Engineering. the Pilot Plant as a teaching facility alone is therefore busier than the other laboratories (Food Microbiology, Food Chemistry) in the department.

As an income generating unit, the facilities in the Plant have

been used since 1989 for Processing of Milk Products. Raw milk is standardized (fat content adjustment) and sold to willing customers in their own containers. Very little packaging of fluid milk is done. Other dairy products include yoghurt and mala which are both packaged in 0.5 litre translucent polyethylene bags, cheese (both fresh and ripened), ice cream and to a limited extent the cream. Recently also, although not yet well established, the department has initiated small-scale commercial meat processing (basically ham, bacon and sausages) for the same purpose.

Together, the income generated processes earn an average of KShs.15-20,000 per week.

Expansion of the income generating processes in the Pilot Plant is limited by lack of space and personnel. The unit is used for over 60% of the time for teaching. The same technicians are basically used for teaching as well as for processing. Expansion is, however, possible through utilization of the evening and early morning hours. Through this sort of arrangement, the Pilot Plant can generate a further KShs.15-20,000 per week, without compromising the standards of teaching in the department. The success of this additional arrangement will, however, depend on there being well worked-out financial incentives to the processing staff to cater for their overtime. It might also require provision of night/late evening/early morning transport for the same persons especially if they do not reside in the Campus. Additional staff would also need to be

employed to reinforce the present team.

The Pilot Plant has also the potential for processing other foods such as fruit and vegetable products (fruit juices, jams, jellies, marmalades, tomato ketchup, tomato sauce, potato products etc.) for income generation. The processing of these products could be incorporated in the expansion suggested above.

Handling a difficult situation

It was time to resume my studies and I was so sick in hospital that this was not possible. This was a totally difficult situation especially when looking at the circumstances that led to my being unwell.

I was going home one Sunday afternoon after participating in a hockey tournament when I was brutally attacked and left for dead. the next morning I was found after spending the night in bush and hospitalised. During this time, my faculty resumed for the final year exams. I was a student in the last 'A' level lot, and failure to resume meant I would not graduate with my colleagues.

I received a lot of help and encouragement from the University Administration and especially from Prof. C.M. Kiamba (Principal College of A.& E.), Prof. R.M. Mwangi (for Dean Faculty of Science), Dr. D.N. Mungai (Chairman Dept. of Geog.), all the staff of Geog. Department and most of all my classmates (B.Sc. Geog. III 1993). Life was so difficult and studies

so strenuous especially trying to cope in class with healthy students and at that time I realised the need for the family unit. My parents and my brothers bore the strain and burden as I struggled daily to attend my classes, go for check-ups, rest and all in all keep on living.

I finally managed to sit for all my exams, go back to hospital for a second operation, work on my dissertation and hand it in time. I did pass my exams, and currently I am a Postgraduate student in the University and still active in sports despite the extra caution needed now and then.

During this time, I learnt a lot of things which can be helpful to both students in our University community.

During this time, I learnt a lot of things which can be helpful to all students and non-students in our University community.

Firstly as a student, I got to appreciate the need to be in good terms with people and more so those in your Department. Difficulties should never deter you from your plans. Your dreams should never be shattered by hardships along the way. Some situations are lessons by themselves and one does not have to learn them in classroom, so never give up on your dreams and ambitions. At times I almost gave up, but when I looked at my situation as temporal, I managed to carry on. I also learnt the power of prayer. To those of us who believe in God, "Prayer Changes Everything".

Secondly to all of us, we should always be grateful for what we have. We should never be envious of other peoples achievements. I have always wondered why I had to be a victim of an attack especially from people I knew; and why man lets jealous thoughts overtake his reasoning and set out on a destructive mission of another persons efforts.

Lastly, as human beings we are bound to endure all sorts of situations in this life, and all we can do is to accept our experiences and let them teach us more and prepare us for the future. Every new day brings different lessons and all we can do is accept them and struggle to carry on. At the end of the day, God our very source of life has a reason for all things and therefore life should never loose meaning.

News Flash

Senate recently approved the establishment of the Institute of Dryland Research and Utilization.

The following have been appointed to take charge of various sections for a period of three years with effect from September, 1995:

Prof. J.M. Mbuvi of the Department of Soil Science has been appointed Director.

Prof. B.N. Mitaru of the Department of Animal Production is Deputy Director (Research and Development).

Dr. K.R. Musimba is Deputy Director (Outreach/Extension).

Varsity Focus wishes to congratulate the appointees.