

Asinasi Fina Opio

## ***Curriculum Vitae***

**OPIO, ASINASI FINA, BSC AGRIC; MSC. CROP SCIENCE PHD,**

TELEPHONE: 256 41 4320212; 256 772423907

EMAIL: [f.opio@asareca.org](mailto:f.opio@asareca.org) / [finaopio@yahoo.com](mailto:finaopio@yahoo.com)

**DR (MRS) ASINASI FINA OPIO**

**A: Personal Data**

Dr. Fina Opio was born on **April 23, 1954** to Disan Jason Namudde at Majanji, Busia District. She is **married** with two children. Both parents of Dr. Opio were primary school teachers but depended heavily on Agriculture. Therefore Fina underwent farming apprenticeship, which cultivated in her a deep interest in Agricultural profession.

### **B: Key Qualifications**

Dr. Fina Opio is one of Uganda's top agricultural development experts and a highly skilled in plant pathology, bacteriology, participatory agricultural research, technology development and dissemination, rural development, Gender and Agricultural related issues. She has a wide experience in Agricultural development issues, strategic planning leadership and management, science and technology policy, agricultural development policy and innovations, all built over twenty years of career development path.

She has **published over 30 papers** in international scientific journals and over 60 papers in conference/workshop proceedings. Due to her outstanding performance and contribution to Agricultural Science and development, she was recognized by NARO and Awarded "*an outstanding performance Award in recognition of Excellent Execution of her official Duties As A Scientist in NARO During The Period 1998-2000*". In 2004 she was recognized by Forum for Women Educationalist in Uganda and nominated for the **SARAH NTIRU Award**. She was the second run-up for Women Achievers of the year in Uganda. In 2006 she was nominated for the **Presidential Science Excellence Award** and competed with top eminent scientists in Uganda. She is **a fellow of Uganda Academy of Science and African academy of Science**. She has been a member of the governing council of Uganda Academy of Science since 2000; and a Vice-President from 2002 to 2004.

Dr. Fina Opio holds **a Ph.D in Plant Pathology** from Sokoine University of Agriculture, Morogoro, Tanzania; a Masters of Science in Crop Science from Nairobi University in Kenya; and Bachelor of Science in Agriculture from Makerere University in Uganda. She has attended a number of courses on research management, strategic planning science, technology policy and innovations, leadership, research management, gender mainstreaming, Biotechnology, Agricultural development and many pathology related courses. She has excellent interpersonal and communication skills.

Dr. Fina Opio has recently been appointed the Executive Director of ASARECA. She assumed office on March 01, 2013. She has previously been the Manager Staple Crops Program of ASARECA. She joined ASARECA on June 1, 2007. Prior to joining ASARECA she was the Director of of the National *Crops Resources Research Institute (NACRRI) based at Namulonge. NACRRI is one of the Institutes of the\_National Agricultural Council of Uganda\_* She has been a member of many governing boards councils including the **Uganda National Council of Science and technology** and where she was a member of the **Executive committee of the Council**. Fina serves as a consultant to both national and International organizations. She was a member of the **Advisory Panel** that Reviews proposals for **African fellowships** from Rothamstead International in U.K (2005 – 2010). She was a member of the **Steering committee for Gender and Diversity Programme of the CGIAR** for the Women fellowship

Programme in Eastern Africa. In 2005 she was a member of a working group that drafted the **Biotechnology briefs for CTA** (The Technical Centre for Agricultural and Rural Cooperation) for ACP (African, Caribbean and Pacific) based in The Netherlands. She was a member of the VITAA (Vitamin A for Africa) Steering Committee. The VITAA initiative then covered Uganda, Kenya, Tanzania, Ethiopia, South Africa, Mozambique and Ghana. She was the Chairperson from 2002 – 2005. She was a member of the **Task Force for Agricultural Extension** that helped design Uganda's National Advisory services Program (NAADS). She was a member of the team formed by COMESA to design the **Alliance for Commodity Trade in Eastern and Southern Africa (ACTESA)**. **She was been a Member of the Board of Trustees for CIAT (2008 - 2011)**; On the CIAT BOARD she was a member of **the Audit Committee**; and **She is a Council member for Busitema University of Science and Technology** where she chairs the planning and development committee.

**C: Inter-personal skills and ability to operate effectively within and between teams.**

Dr. Fina Opio has excellent inter-personal skills. Her ability to build team work, guide and inspire high level performance in staff is evidenced by the coherence and togetherness, motivation, determination and high level of performance of the Namulonge staff during her term as she Director of the institute. The Institute has remained strong after her departure because of the what she had set as a standard for the institute. It has also been evidenced from the beans programme which has remained strong and able to overcome any threat the most recent being the bean root rot disease in South Western Uganda. Because of her Interpersonal skills and excellent team work she has on many occasions been asked to serve as a chairperson of a number of task forces, committees, and conference organizations both Nationally and Internationally. Examples are the task-forces that she has chaired to develop strategic plans for addressing urgent and serious problems such as coffee wilt, banana wilt, Artemisia and integrated model farms. They have delivered timely and the output work has been of quality standard.

She has exceptional ability to promote participatory Inter-disciplinary approaches in addressing institutional, strategic and policy challenges as can be gauged from her CV. Dr. Opio has proven team leadership capability, result oriented, and a proven track record of effective management of human and financial resources. She is excellent in English language and communicate effectively both orally and written.

**D: Leadership and management experience**

**Executive Director, ASARECA.**

Dr. Opio assumed the office of Executive Director, ASARECA on 1 March 2013. The Association for strengthening Agricultural Research in Eastern and Central Africa (ASARECA) is an association of 11 countries. These are Burundi, Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Madagascar, Rwanda, South Sudan, Sudan, Tanzania and Uganda.

**Manager of the Staple crops Program of ASARECA June 2007 to date.**

Dr. Opio was appointed a manager, Staple Crops Program of ASARECA effective June 1, 2007. The Staple crops Program was created out of six former networks of ASARECA. These Include; Banana Research network (BARNESA); East and Central African Maize and wheat network (ECAMAW); East and Central Africa rice network (ECARRN); East and central Africa sorghum and millet network (ECARSAM); East and central Africa root crops network focusing on cassava in ECA (EARRNET); Potato and sweet potato network (PRAPACE). The crops to be addressed by this program include banana, Cassava, maize, rice, millet, sorghum, potato, sweet potato and wheat. Fina has established and operationalised the staple crops programme since she was appointed. Staple Crops is currently the biggest programme of ASARECA. Fina has managed it so well that it is one of the best performing programmes in ASARECA. Since 2007, the staple crops programme has implemented seventeen projects. These projects cut across the eleven countries of ASARECA with excellent outputs in form of technologies, capacity building for the stakeholders (farmers, Extension, Researchers, Private sector including processors) and information on the various technologies. The stakeholders included both male and females. The ultimate aim is to improve nutrition, food availability and wealth creation for the people in Eastern and Central Africa

**Director of Research, NAARI (Now NACRI) October 1999 – 31 May 2007.**

Dr. Fina Opio ,served as a Director, Namulonge Agricultural and Animal Production Research Institute (NAARI) (now NACCRI) from October 1999 to May 2007. NAARI was one of the nine Agricultural Research Institutes under NARO. It was responsible for generating and dissemination of Improved technologies for food and industrial crops and livestock with a focus on beans, cassava, cereals (maize and rice), sweet potato, soyabean, potato and animal production. NAARI is now the new National Crops Research Institue (NACRRI). As a Director of Research, Fina was the Chief Executive of the Institute. She was responsible for the overall management and administration of personnel, resources and all programmes and research activities at the institute. She led, directed, coordinated and managed all the affairs of the institute, mobilizing donor support. and ensuring that financial and other resources are managed properly. During Dr. Opio's term of office as Director NAARI, the Institute was one of the best Donor funded institutes in NARO. For example for the five years (2002 – 2007) NAARI received over 15 (fifteen) billion Uganda shillings for Research.

She was responsible for guiding and coordinating preparation and of institute programme budgets. She coordinated and ensured that all approved research trained and outreach programmes were implemented as planned. She had to ensure periodic review of research results with farmers, producers and extension agents. Dr. Fina Opio had to prepare annual and periodic reports on activities of the institute. She was responsible for projecting a positive image of NAARI and NARO at large and informing the public about NAARI and NARO. She also participated in advising government on policy issues related to Agricultural Research at national and international level. She has participated in preparation of policy briefs. On a number of occasions she has been a member of Ministerial delegations (i.e. Minister of Agriculture, Animal Industry and Fisheries) for

## Asinasi Fina Opio

International Foras in and outside Uganda. She was a member of the presidential delegation to the 2<sup>nd</sup> World Food summit in Rome in 2002.

As a Director of Research, Dr. Fina Opio undertook a deliberate effort to ensure that technologies developed at the Institute did not only get to end users, and but also contributed to improvement of their way of life. She started an aggressive outreach programme in Busukuma Sub-county (which is the Sub-county where NAARI is based). By the end of 2006, over one thousand farmers had been trained in Busukuma. Technologies of Beans, Cassava, Rice, Maize, Sweetpotato and Animal Production were demonstrated and availed to the farmers in the surrounding area. All activities at the Institute are client oriented and farmer participatory. Dr. Opio's innovative skills have been demonstrated by her initiatives to ensure that technologies developed at NAARI are commercialized. This is to enable producers earn more money and be able to improve their welfare. A few examples of her initiatives are cited below:

- (i) She undertook consultation with private sector to develop strategies for Commercializing NAARI technologies. By the time she left NARO collaboration between NAARI, Makerere University, Mukwano. VODP and seed companies had been initiated with the aim of commercializing soyabean. A concept note had been developed for sharing with a wider number of stakeholders. Seed multiplication in the North had been started with funding from VODP to enable the farmers get seed. The seed produced was to be distributed to more farmers for further multiplication. The grain was to be sold to Mukwano for processing into different products.
- (ii) A collation project on sweet potato involving stakeholders from production to consumption had been undertaken where NAARI was an active participant. The partners included CIP, PRAPACE, and BUCADEF, processors, transporters, exporters and farmers. The aim was to commercialize sweet potato with emphasis to orange fleshed sweet potato.
- (iii) NAARI initiated a number of discussions with different stakeholders on commercializing cassava, possible products are starch (for biodiesel, textile, pharmaceuticals to mention but a few), GARI, feeds for livestock and flour for various products for human consumption. The last initiative she made before leaving NARO involved a discussion with Industrial Research Institute based at Nakawa, Kampala, Uganda. A small working group with membership of the two institutes was set up to develop concepts on how cassava could be commercialized.

As Director, Dr. Opio ensured that activities at the institute were moving smoothly and funded. Through encouragement of scientists and personally participating in soliciting funds from different donors and writing proposals. NAARI (now NACRRI) as an institute was able to attract funds that have helped solve farmers and consumers problems regarding the mandate commodities. During Dr. Opio's term of office as Director of Research NAARI she attracted on average over three billion Ugandan Shillings annually. This level of funding for NACRRI clearly demonstrates Dr. Opio's ability to attract funds and her negotiation skills. Most of the recent infrastructure development (e.g.

Biotechnology and tissue culture laboratories and screen houses) were all initiatives started by Fina before she left NACRRI.

Dr. Opio has forged and maintained excellent partnership and collaboration with both National, Regional and International Organizations. She has had excellent collaborations with a number of International Research Centers and Advanced laboratories and Universities. This evidenced by the number of these centers Namulonge Research Institute works with. To date NaCRRI collaborates with nine CGIAR centers, a number of advanced laboratories, Universities abroad and within Uganda, over ten NGO's, Private Sector , Industrialists, Traders, Farmers organizations and farmers.

### **Head of Beans Programme , NARO: 1993 1999**

Dr. Opio was first asked to act as Head of Beans programme in 1993, a position she held until she was appointed a programme leader in 1996, a position she held up to end of September 1999. As a programme leader she was responsible for ensuring that the work of the programme was carried out as planned and prioritization within the programme is done properly. She had to organize annual programme planning and review meetings, seminars and other workshops for the programme. She prepared workplans for the programme, prepared reports and budgets. She was responsible for the proper and efficient utilization and accountability of the funds and other resources allocated to the programme. She was very vigilant in sourcing donor funding. She had to ensure that there was close linkage between research extension and farmers as far as beans research was concerned. This was done through farmer participating research activities, on-farm research, promotion of new bean varieties, courses and seminars. The beans programme, up to now, has a very active and strong technology dissemination programme which has all been possible through Dr. Opio's leadership.

During her leadership of the beans programme, the South Western Uganda was faced with a very serious bean root rot disease which almost wiped out of the beans in that part of the country. Through her organizational and dynamic leadership, and negotiation skills Dr. Opio secured funds from different sources (such as African Highland Initiative, IDEA project, DFID, USAID through CIAT, Maendeleo Technology Transfer Fund) to address the problem. In addition. Dr. Opio forged partnerships between Researches (both National and International), Extensionists (both NGO's and Government) and farmers which enabled development of strategies to control this disease.

As a programme leader Dr. Opio maintained good collaboration between the beans programme and other national research programmes. She had also maintained excellent collaboration with Makerere University, NGO's, International Research Institutes especially CIAT and other national programmes in Africa. She was a member of the steering committee in East and Central African Bean Network (ECABREN) where she was a chairman in 1997. There were nine countries in this network then. As a member of this network Dr. Opio participated in planning activities and setting priorities for the network and deciding on the strategy and implementation of the programme in the network. She also actively participated in annual budgets and allocation of funds for the network.

## Asinasi Fina Opio

During Opio's term as head of beans programme, the programme released eleven bean varieties as follows: in 1994 two varieties K131 and K132 were released; in 1995 three varieties NABE 1, NABE 2 and NABE 3 were released; and in 1999 seven varieties (four climbers and three bush) were released. The climbers were NABE 7C, NABE 8C, Umubano and NABE 9C. The bush were NABE 4, NABE 5 and NABE 6. All the bush beans including those released in 1994 and 1995 yield between 1500 kg/ha to 2500 kg/ha. While the climbing beans can yield up to 4000 kg/ha. The present beans yield at farm level are very low with only few farmers reaching 800 kg/ha. If the new varieties are adopted the farmers can double or even triple their yields.

To enable the farmer adopt and be able to improve their yields the beans programme under Fina's leadership embarked on an aggressive technology transfer activities. The activities involve accelerated variety promotion and dissemination. This included multiplication, demonstrations and distribution of seed to farmers. A farmer to farmer seed multiplication methodology was adopted by the programme. To illustrate this a few examples are cited below:

- (a) In 1995/96 the programme multiplied and distributed seed to 30 districts of Uganda. In the districts where follow-up studies have been done 200-400 farmers had had access to the new varieties within one year (by end of 1996).
- (b) In 1997/98 using a farmer to farmer seed multiplication and accelerated variety dissemination approach and with more intensification than in 1995/96, over 1,000 farmers in Apac district had access to new technologies in one year. This type of activity has been extended to other districts. The two examples demonstrate how this methodology has been a very fast means of getting the technology to the farmers. Previously, it would take over five years before farmers could get access to the new technologies developed.
- (c) It was possible to develop with farmers in Kisoro a management strategy which incorporates tolerant varieties, soil amendments and cultural practices (such as earthing up and intercropping) which can effectively be used to manage bean root rots in South Western Uganda. The methodology is being adopted very fast in the area. Bean root rot had made it impossible to grow beans in Kabale and Kisoro. Using this strategy, farmers can now grow beans again in these areas. This work in which Dr. Opio was the project leader was a collaborative effort between the Uganda National Beans Programme, CIAT, Kawanda, Makerere University, AFRICARE (Kabale), African highland initiative (AHI), CARE (Kabale), UNIFA (Kabale) and IDEA project. It also involved collaboration with Rwanda and Kenya.

From April 2003 – March 2005 Dr. Fina Opio received funds from Maendeleo Technology Transfer Funds which resulted in scaling of the dissemination of technologies for the management of bean root rots in Kisoro and Bushenyi districts in Uganda. The funds were competitive and Fina's project was one of the 10 projects funded in the whole of East Africa. By the end of 2006, over 20,000 farmers in Kisoro and Bushenyi had accessed and utilized management techniques for the bean diseases. The strategy was to disseminate control measures which include use of resistant varieties

and soil amendment, crop rotation and intercropping. The root rot disease has been controlled and farmers can now grow beans. By the end of the project a number of farmers were able to sell beans and earn as much as 800,000/= in a season. This was not possible before.

With funds from DFID, Dr. Opio together with CIAT and CARE initiated a community based technology transfer of integrated pest management for beans in Kabale District. The farmers within the community were trained and are themselves trainers and community based extension agents. These lead farmers have now initiated demonstrations for training other farmers.

**As a principle research officer and Head of Beans Programme** Dr. Fina Opio assisted the Director of research of Namulonge research institute with any administrative duties as far as research (then) was concerned and any other duties that were assigned when the Director was away. In assisting the Director, She participated in priority research setting for programmes and experimental plans and reviewing the proposed experiments. On many occasions she served in an acting capacity as the Director, Namulonge Agricultural and Animal Production Research Institute (NAARI) and played a key role in administration, development, public image and achievements of the institute.

## **E: Scientific and Research Experience**

### **Experience in analysis and understating agricultural development innovation issues**

Dr. Fina Opio has a vast experience in analyzing and undertaking agricultural development innovation issues. She worked in Agricultural research for the last twenty six years and carried out several diagnostic and systems analysis of mainly crops and many farming systems. She therefore has a broad understanding of agriculture, rural and capacity development issues particularly in Africa and Uganda in particular. Dr. Opio has the ability to undertake innovations systems analysis and relate the problems to the overall development needs of agriculture and natural resources. Dr. Opio is an accomplished innovative researcher.

Through her innovative skills she developed a farmer to farmer seed multiplication and accelerated variety dissemination approach which has enhanced fast bean seed and technology dissemination. This system enabled fast scaling out of technologies which has quickened the solving of the bean root rot problem. She has also spearheaded the development of the Integrated Model Farm concepts which envisages taking forward the presidential initiative of zoning and developing model farms for each zone and for different farm typologies.

### **Strategic and applied research**

Dr. Fina Opio started her research carrier in 1980 as a scientific officer (plant pathology) at Kawanda Research Station, Ministry of Agriculture and Forestry where she was assigned to work on bacterial diseases starting with bacterial wilt of solanaceous crops caused by **Pseudomonas solanacearum** E. F. Smith in Uganda. This disease was (and is still) a menace to solanaceous crops such as tomato, potato (i.e. **Solanum** potato);

eggplants. She undertook extensive research activity on this bacterium. She identified twelve cultivated crops and seventeen weeds as hosts to this bacterium causing this disease. She also found that three biotypes of this bacterium occurred in the lake Crescent area. This information was important in devising control measures for the disease. Control measures such as crop rotation would not involve a known host crop and weeds would have to be controlled vigorously. Some crops such as beans were found to be symptomless carriers of the bacterium. The present work on bacterial wilt of potato and tomato builds on the work, which Dr. Opio started in 1980. Some of the methodology she used have been adopted by the postgraduate students working on this disease at present. She has helped guide these students in their work.

In 1985 to 1993 Dr. Opio was assigned to work on bacterial diseases of beans with emphasis to common bacterial blight of beans. Some of this work which formed her Ph.D thesis, has been instrumental in developing control strategy to the common bacterial blight disease of beans not only in Uganda but in all Eastern and Central African countries where bean is important. Because of her effort and dedication in her work Dr. Opio was made a leader for the common bacterial blight sub-project of beans in Eastern Africa. Dr. Opio is regarded as an authority on the management of the bean common bacterial blight in Eastern and Central Africa. The resistant varieties she identified have been used by breeders in the different countries to improve on the resistance of locally acceptable but susceptible varieties.

In 1991 Dr. Opio was promoted to the rank of **Research Officer** but remained at Kawanda research station carrying out duties described above up to end of 1993. In November 1993 Dr. Opio was asked to act as head of beans programme.

In January 1994 Dr. Opio was appointed **Principal Research Officer** and posted to Namulonge Research Institute. She continued acting as head of bean programme a position she held since November 1993 and appointed programme leader, beans in 1996.

Besides being a programme leader Dr. Opio continued her research work as a bean pathologist. From 1994 to date Dr. Opio has carried out research in different aspects of beans. These include root rots, anthracnose, angular leaf spot, floury leaf spot and continued with work on bacterial blights. A challenge she faced was the bean root rot problem in South Western Uganda mainly Kabale and Kisoro. In this area beans is one of their major crops and yet all the bean varieties were wiped out by the root rot. The farmers were abandoning beans but had no replacement. There was a big dilemma. Due to Dr. Opio's dynamic and aggressive research approach and in collaboration with CIAT, NGO's, Makerere University, extension staff and farmers in these districts a disease management strategy for the bean root rot has been developed and farmers are now able to grow beans in the area.

Dr. Opio was appointed a **Director of Research**, Namulonge Agricultural and Animal Production Research Institute in October 1999. Despite the administrative duties as a Director Fina has continued research work on beans. She has continued with the research work on bean roots. The emphasis on this disease on root rot has since 2000 been to scale up the work on root rots and also to understand more the behaviour of the organisms causing root rot. This work was carried out in collaboration with CIAT,

Makerere University, NRI, Africare, CARE, and district local governments in Kabale, Kisoro and Bushenyi. The organisms causing the root rots were characterised and the nature of variation of these organisms determined. In addition Dr. Opio has undertaken extensive studies on the bean anthracnose which is another serious disease on beans. She has so far determined the minimum seed infection that can be in a farmer's seed to result in serious disease infection in the field. Her work has also shown that there are difference in bean varieties in their ability to transmit the disease. This is a very important attribute which farmers can use and result in reduction of the disease in the field

All the research activities Dr. Opio has carried out have been geared to reducing losses of food crops due to diseases and other factors; and increasing productivity of the crops she has handled. However, Dr. Opio in her research activities has collaborated very closely with other scientists on the programme (i.e. breeders, agronomists and socio-economists) to ensure that productivity at the farm level is increased and ensure proper nutrition and income of the rural population. She has also collaborated with Farmers, NGO's, Makerere University, International institutes such as CIAT and other countries. From all this research effort, Dr. Opio has published in Referred Journals and in conference and workshop proceedings(selected list of publications attached ). She has communicated to the public on Annual Reports, T.V., and Radio talks and posters and leaflets.

### **Adaptive Research and farmers empowerment and Technology Dissemination**

Dr. Fina Opio, right from the onset of her research carrier had a desire to solve the farmers problems with their involvement and participation. Throughout her research Dr. Opio has involved the farmers. She has involved not only farmers but also other stakeholder in identification of the problems, priority setting, and technology development validation and dissemination. The work on bean root rot disease and farmer to farmer seed dissemination are too good examples that where farmers were involved at all stages of technology development and dissemination. At the moment, farmers in South-western Uganda are themselves involved in training fellow farmers on the problems of root rot disease. She has guided and been involved in rapid rural appraisals of farming systems; farmer managed on-farm trials right from 1986. She has been involved in training and empowering farmers and farmer groups in many parts of the country in priority identification, technology evaluation.

Dr. Opio has also been active in technology dissemination for all technologies developed at NAARI. As mentioned earlier the Vumbalisation of Busukuma, and other community based seed multiplication in different parts of this country for cassava, rice, maize, sweetpotato and Feed-resource management for Livestock especially for dry season feeding. She has been active in promoting the Orange fleshed sweet potato high in Vitamin A.

She has been very active in advisory service and ensuring that farmers understand the problem they are faced with on their farms. During the period 1980 – 2007, Dr. Opio carried out advisory service to farmers, researchers and extension staff in addition to the research work and administrative duties. This involves all diseases of different crops. This includes identification of the diseases, the disease causing organisms and possible

control methods of the diseases. The crops mainly includes horticultural crops, maize, beans, soybeans, bananas, cassava, coffee, sorghum, millets, sweet potato and potato.

## **F: Recognition and Awards**

### **NARO Scientist outstanding Performance Award**

In recognition of Dr. Opio's excellent Execution of her Official Duties As A Scientist in in NARO During the Period 1998-2000

### **SARAH NTIRU AWARD: 2004**

Dr. Fina Opio was recognized as a woman achiever by the Sarah NTIRU Award organizers which is Forum for Women Educationalist in Uganda in 2004. She was nominated for the Sarah NTIRU Award and was the second run up.

### **Presidential Scientific Excellent Award 2006**

Due to her outstanding research work, Dr. Fina Opio was nominated for the Presidential Scientific Excellent Award 2006. She competed with Eminent Scientists in Uganda; and Prof. Kayanja, the Chairman of NARO Council and Vice-chancellor of Mbarara University was the winner of the 2006 Award.

### **Fellow of Uganda National Academy of Sciences: Awarded 2003**

In recognition of her work and outstanding contribution to science and development Dr. Opio was Awarded a fellowship of Uganda Academy of Science; and fellowship of African Academy of Science in 2008.

## **G: Local and International consultancies, committees and Boards**

Dr. Fina Opio has served as a member of many national task forces, local and international committees, boards and undertaken a number of consultancies as listed below:

- Member of the council of Busitema University of Science and Technology ( 2009 –Todate).
- Member of the CIAT Board (CGIAR Center based in Colombia, Latin America) (2008 – 2011)
- Member of the team formed by COMESA to design the **Alliance for Commodity Trade Eastern and Southern Africa (ACTESA) (2009 – 2010)**
- Member of the advisory panel for the Rothamstead International U.K. fellowship for Africa(2003-2010)
- Member of the steering committee for the Women fellowship in Eastern Africa by the Gender and Diversity Programme of the CGIAR(2008-2010)

## Asinasi Fina Opio

- Member of the working group to draft Biotechnology briefs for CTA in The Netherland) for Africa, Caribbean and Pacific countries(2005)
- Member of NARS Functional Analysis Sub-committee (2004).
- Member of the VITAA (Vitamin A for Africa) steering committee. The VITAA initiative covers Uganda, Kenya, Tanzania, Ethiopia, South Africa, Mozambique and Ghana. She was chairperson of this steering committee 2002 – 2005.
- A member of the council of the Uganda Academy of Science. She was a Vice-president 2002 – 2005.
- A council member of the Uganda National Council of Science and Technology She is also a member of the Executive Committee of this Council(2002-2006)
- Member of the Steering Committee for the Banana bacterial wilt(2004-2007)
- A chairperson for the Banana bacterial wilt technical committee.(2004-2007))
- Chairperson of the task force to develop the strategy to control the Banana bacterial wilt (2003 – 2004).
- Chairperson of the taskforce to develop a strategy on Integrated Model Farms. This was a strategy on how farmers can effectively and efficiently integrate their resources to maximize their profits for different farm typologies(2004-2005)
- Chairperson to develop a strategy for addressing artemesin research in Uganda(2005)
- Member of the Agricultural chemicals technical advisory committee which advises the Agricultural chemicals board (since 1993-2007).
- Member of board of governors, Makerere College School (1994 – 2004).
- Member of the Integrated Pest Management technical advisory committee for the African Highland Initiative (1993 – 1995).
- Member of the Uganda National Action Committee (NAC) of African women leaders in Agriculture and environment (1995 – 1998).
- Member of the task force on agricultural extension programme that designed the National Agricultural Advisory Services (NAADS) (1999 – 2000).
- Vice-chairperson of the working committee on Uganda Women’s Effort to Save Orphans (UWESO). U.K. trust (1995 – 2000). This trust funds women and orphans to carry out sustainable farming that is profitable.
- Vice-chairperson of the Coffee wilt task force that developed a strategic framework for addressing coffee wilt in Uganda (1999 – 2001).
- Chairperson of the task force that developed the medium term plan for addressing coffee wilt(2002)
- Chairperson of the Gender task force that developed guidelines for mainstreaming gender into NARO activities. She was the gender contact person in NARO at the moment (1999 – 2001).
- Member of the steering committee for the East and Central African bean network (ECABREN) and chairperson in 1997.
- Member of Bio-Net – International consultative group(2005-2007)

## **H: EDUCATION**

Dr. Fina Opio started her school education from Busia Primary School (1960-61) and later on transferred to Lumino (now Bukwekwe) Primary School (1962 – 1967). She joined Tororo Girls School for secondary education in 1967 (and stayed up to 1972)

where she did both her O-level and A-level. Because of her apprenticeship and interest in agriculture she was more interested at school in science subjects that could enable her pursue a career in agriculture. In 1973 she was admitted to Makerere University for a Bachelor of Science degree course in agriculture. Dr. Opio received an Honours degree in agriculture from Makerere University in 1976 with the desire to become one of the country's research scientist who could help generate information to enable the peasant farmers improve on their methods of farming and improve their productivity.

Dr. Opio's interest had been earlier aroused in understanding farmers planting strategies, for example in planting different crops and at the same time keeping some animals on the same farm, seed selection and storage in relation to their goal in sustainable yields and food storage. Experiences with farmers' practices especially during Dr. Opio's earlier years and later during her undergraduate farm case study got Dr. Opio seeking to pursue an understanding of factors that can lead to increased production and why despite efforts the farmers their production was low.

One of the most important causes of low yields was attributed to too much rain which resulted in diseases that persistently destroyed crops such as cowpeas in her home area at the time. Her pursuit of a course in plant pathology for masters which was undertaken at Nairobi University was to enable her understand more how these diseases of crops could be controlled. Inspired by the different diseases she used to observe on cowpeas, her M.Sc., thesis was on the Epidemiology and control of cowpea rust. She obtained M.Sc. in Crop Science with a focus on Plant Pathology.

When working at Kawanda Research Station where she had been employed in 1980, and assigned to work on bacterial diseases. Dr. Opio was faced with a problem of bacterial blight of beans, a disease that even made it impossible for the seed project to multiply beans (for sale to farmers) at their main seed multiplication farm at Kisindi farm in 1983 – 1984. All the available varieties were susceptible to this disease. Challenged with the bean common bacterial problem Dr. Opio then undertook to study in detail the factors that were responsible for this serious outbreak. To equip herself with the techniques to undertake research into this problem; Dr. Opio attended a three months course on bean pathology at CIAT, CALI, Colombia with emphasis to bacterial diseases in 1985 (April – July 1985). Later in the same year she attended a three weeks course on identification of plant pathogenic fungi and bacteria at the International Mycological Institute (then CMI). In 1989 she attended a six weeks course on field and laboratory techniques in plant bacteriology at the University of Nebraska, USA. At this University she worked with Professor Dermont Coyne and Professor Anne Vidaver who were renowned for their work and experience with common bacterial blight (CBB) for beans. Dr. Opio again underwent a three weeks course in legume pathology at ICRISAT, India later in 1989. With the knowledge and experience from these short courses Fina then registered for part-time Ph.D. study in Sokoine University, Tanzania and all the research work was done in Uganda. Dr. Opio's research resulted in the identification of the nature and extent of the variability of the bacterium causing CBB, its mode transmission, survival, identification of resistant varieties that could be used in the hybridisation programme to improve on the acceptable but susceptible bean varieties to CBB. Dr. Opio's work on bacterial blight of beans resulted in a recommendation of an integrated approach involving use of disease free seed, resistant varieties, destruction of infected crop residue and crop rotation in

order to reduce the effects of this disease not only in Uganda but also other Eastern and Central African countries. She obtained her Ph.D. in 1993. Some of the work is published in papers listed in the list of publications attached.

During the course of her work, on beans as a pathologist Dr. Opio had been faced with a problem of persistent high levels of diseased seed in farmers and seed project seed lots. To reduce this problem Dr. Opio sought to devise a quick but easy means of detecting presence of fungal, bacterial or virus infection in bean seed. A method which could be used by seed certification officers for both farmers seed and beans for export. She therefore attended a three months course on the use of biotechnology with emphasis to the use of Polymerase chain reaction (PCR) in identification and detection of plant pathogens at the Scottish Crops Research Institute in Dundee Scotland, U.K in 1996. The method is very fast as compared to the traditional grow-out test or culture techniques.

### **I: Leadership and Management courses attended**

- Science, Technology and Innovation Policy, Harvard University J. F. School of Governance.(November 2005).
- Womens' Leadership and Management Development course by Training Resource Centre 2005, ILRI, Addis Ababa.
- Management and leadership Skills, Grand Palm, Botswana , October 2002. (Marcus evans).
- The leadership for change workshop, Kampala, Uganda July 1994, Winrock International.
- NARO Leadership and Institutional Strengthening Training workshop.
- How to write convincing proposals: Isnar, the Haig Netherlands; 2004.

### **J: SELECTED PUBLICATIONS AND REPORTS**

Fina has published widely in International Journals. She has also communicated with other scientists and partners her findings in research through conferences, workshops and meetings and reports. Details on these are given below.

#### **JOURNALS**

Nkalubo S.T.; .Melis R., Derer J., Laing M. D., Opio F., 2009. Genetic Analysis of Anthracnose resistance in common bean breeding source germplasm. *Euphytica* (2009) 167: 303 – 312)

Gichuru V., Buruchara R. A., Okori P., Opio F., Ugen M. A., 2006. Identification and characterization of *Pythium* spp. Of major crops in Southwestern Uganda. *Phytopathology* 96(6): S40.

Gichuru V., BurucharaR. A., Okori,P., Opio, F., Ugen M. A., 2006. Pathogenicity of bean pathogenic *Pythium* spp.on major crops in a bean based cropping system. *Phytopathology* 96(6): S40.

- Gichuru V., Aritua V., Lubega G. W., Lubega R., Edema E., Adipala and Rubaihayo P. R., 2006. A preliminary analysis of diversity among East African sweet potato landraces using morphological and simple sequence repeats (SSR) markers. *Acta Hort.*, 703: 159-164
- Regina Kapinga, Pamela Anderson, Charles Crissman, Dupeng Zhang, Berga Lemaga, and Fina Opio, 2005. Vitamin-A . Partnership for Africa. A food Based Approach to Combat Vitamin A Deficiency in Sub-Saharan Africa through Increased Utilization of Orange-fleshed Sweet Potato. *Chronica Horticulture* 45(3): 12-14
- Namayanja A., Tukamuhabwa P., Opio F., Ugen M. A., Kimani P., Babirye A., Kitinda X., Kabayi P. and Takusewanya R., 2003. Selection for low fertility bean lines tolerant to root rot. *Bean Improvement Cooperative (BIC)*, 46:95-96.
- Namayanja A., Tukamuhabwa P., Ugen M., Opio F., Kitinda X., Takusewanya R., Eyedu H., Kabayi P., Mukabalanga J., Luyima G., Ssekabembe R., and Sulume J., 2004. Registration of the improved bean varieties in Uganda: 1994-2003 (In press).
- Namayanja A., Tukamuhabwa P., Ugen M., Opio F., Kitinda X., Takusewanya R., Eyedu H., Kabayi P., Mukabalanga J., Ssekabembe R., and Sulume J., 2004. Release of two new sugar bean varieties in Uganda (In press).
- Opio F., and Namayanja A., 2002. Common bacterial blight of bean research in Uganda 1986-2001. *Bean Improvement Cooperative (Bic)* 45: 162-163
- Opio F., Kimani P.M., Musana S.M., and Buruchara R., 2002. Research on common bacterial blight of common bean in East and Central Africa. *Bean Improvement Cooperative (Bic)* 45: 160-161.
- Osiru M. O., Rubayihayo P. R and Opio A. F., 2001. Inheritance of resistance to tomato bacterial wilt and its implication for potato improvement in Uganda. *African Crop Science Journal* 9 (1): 9-16.
- Osiru M.O., Rubayihayo P. R and Opio A. F., 1999. Screening tomato accessions for resistance to bacterial wilt: *MUARIK Bulletin* 2: 65-70.
- Sseyewa C., Opio A. F., Swinpume J. R., Van Damme P. L. J., Abubakar A. M., 1999. Sustainable collar rot disease of passion fruits in Uganda. *International Journal of Pest Management*, 45 (3) 173-177.
- Opio A. F. and Ugen M. Adrogu 1998. Control of bean diseases and insect pests using farmer's indigenous knowledge. *Annual report Bean improvement cooperative* 41:188-189.
- Bua B., Adipala E. and Opio A. F., 1998. Screening cowpea germplasm for resistance to bacterial blight in Uganda. *International Journal of Pest Management* 44 (3) 185-189.

- Paul R. J. Birch, Lizbeth J. Hyman, Robert Taylor, A. Fina Opio, Calude Bragard and Ian K. Toth 1997. RAPD PCR-based differentiation of *Xanthomonas campestris* pv. *Phaseoli* and phaseoli, var fuscans. *European Journal of Plant Pathology* 103:809-814.
- Opio A. F., Allen D. J. and Teri J. M., 1996. Pathogenic variation in *Xanthomonas campestris* pv. *Phaseoli*, the casual agent of common bacterial blight in *Phaseolus* beans. *Plant Pathology* 45: 1126-1133.
- Opio A. F., 1995. Yield loss associated with floury leaf spot in common beans in Uganda. *Annual Report of Bean Improvement Cooperative* 38: 147-148.
- Opio A. F., Allen D. J. and Teri J. M., 1995. The role of weeds and non-host crops in the survival of *Xanthomonas campestris* pv. *phaseoli* in Uganda. *Annual Report of Bean Improvement Cooperative* 38: 166-167.
- Opio A. F., Allen D. J. and Teri J. M., 1994. Evaluation of inoculation methods and inoculum concentration for *Xanthomonas campestris* pv. *Phaseoli*. *Annual Report of Bean Improvement cooperative* 37: 223-224.
- Opio A. F., Teri J. M. and Allen D. J., 1994. Seed transmission efficiency for *Xanthomonas campestris* pv. *Phaseoli*. *Annual Report of Bean Improvement cooperative* 37:221-222.
- Opio A. F., Teri, J. M, and Allen D. J., 1993. Studies on seed transmission of *Xanthomonas campestris* pv. *Phaseoli* on common beans in Uganda, *African Crop Science Journal* 1: 59-67.
- Opio A. F., 1993. Bean Pathology Research at Kawanda Research Institute, Uganda. In *Breakthrough, a Norleg Newsletter, Issue 8, September 1993*.
- Opio A. F., Teri J. M., and Allen D. J., 1992. Assessment of yield losses caused by common bacterial blight of beans in Uganda. *Annual Report of Beans Improvement cooperative*, 35, 52-53.
- Opio A. F., 1990. Control of common bacterial blight of beans in Uganda. *Annual Report of Bean Improvement cooperative* 33: 41-42.

#### **PAPERS PRESENTED AT WORKSHOPS (CONFERENCES) OR IN WORKSHOP PROCEEDINGS**

- Tinzara W. E., Karamura E., Kubiriba J., Byabacwenzi M., Tushemereirwe W., Opio F., 2010. Integrated Approach for the Management of Banana Xanthomonas wilt in East and Central Africa. Proceedings of the African Crop Science Conference, Cape town, South Africa, 27 September to 2 October 2009, Vol; 9 pp691 - 696

- Nkalubo S., Melis R., Laing M. D., Opio F., 2007. Yield loss associated with anthracnose disease in Uganda market-class dry bean cultivars. African Crop Science Conference. Proc 8:869 – 874. El –Minia, Egypt
- Gichuru V., Ocimati W., Buruchara R., Okori P., Tusiime G., Opio F., and Ugen M. The role of other crops in developing integrated pest management (IPM) of bean root rots. A paper presented at PABRA (Pan African Bean Research Association) Meeting, 31<sup>st</sup> October, 2005 in Kampala, Uganda.
- Gichuru V., Ocimati W., Buruchara R., Okori P., Tusiime G., Opio F., and Ugen M. The role of other crops in developing integrated pest management (IPM) of bean root rots. A paper presented at the Bean IPM Promotion Project Review Meeting held on 9<sup>th</sup> February, 2006 at the Regency Hotel in Kampala.
- Gichuru V., Buruchara R., Okori P., Opio F., and Ugen M. Identification and characterization of *Pythium spp.* of major crops in south western Uganda. A paper presented at the American Phythopathological Joint Meeting held in Quebec City, Canada in July 29<sup>th</sup> – August 2<sup>nd</sup>, 2006.
- Gichuru V., Buruchara R., Okori P., Opio F., and Ugen M. Pathogenicity of bean pathogenic *Pythium spp* on major crops in a bean-based cropping system. A paper presented at the American Phythopathological Joint Meeting held in Quebec City, Canada on July 29<sup>th</sup> – August 2<sup>nd</sup>, 2006
- Opio F., Ugen M., Kabirizi J. and Nasirumbi L., 2006. Women and Food and Nutrition Security in Uganda: The case of bean root rot disease in Bushenyi and Kisoro; and Forage management for zero grazing in Masaka. A paper presented to the CTA/FARAH/RUFORUM Conference on Women in Science for Food and Nutrition Security in Africa, Entebbe, Uganda, 3-7 July, 2006
- Opio F., Ugen M., Namayanja A., Mugagga I., and Mawejje D. 2005. Improving food security in South Western Uganda by transferring and promoting resistant varieties and integrated packages for the bean root rot. A paper presented to the 2<sup>nd</sup> Rockefeller Conference on Biotechnology, Breeding and Seed Systems, Nairobi, Kenya 24-27<sup>th</sup> January, 2005. 15pp.
- Namayanja A., Ugen M. A., Opio F., Ssekabembe R., and Takusewanya R., 2005. Multiplication and dissemination of bean seed in Uganda. A case study of Kabale, Mubende and Sironko districts. A paper presented to the 2<sup>nd</sup> Rockefeller Conference on Biotechnology, Breeding and Seed Systems, Nairobi, Kenya 24-27<sup>th</sup> January, 2005. 15pp.
- Nkalubo S., Melis R., Opio F., WA.J.de Muthiano., and Laing M., 2005. Physiological races of dry bean anthracnose disease in Uganda. A paper presented to the 2<sup>nd</sup> Rockefeller conference on Biotechnology, breeding and Seed Systems, Nairobi, Kenya 24-27<sup>th</sup> January, 2005. 15pp.

- Regina Kapinga, Pamela Anderson, Dapeng Zhang, Michael Herman and Fina Opio 2005. Vitamin- A partnership for Africa for Africa (VITAA): A food base approach to combat Vitamin A deficiency through increased utilization of orange-fleshed sweetpotato. VITAA WINNER OF THE 2003 CGIAR PARTNERSHIP AWARD. Paper presented to the meeting of International Vitamin A Consultative Group (IVACG), Lima, Peru 5pp.
- Mwanga R.O.M., Niringiye C., Odongo B., Opio, A. F., Lemaga B., Kyadondo B., Serunjogi L., Owori C., and Kapinga R. 2003. Partnership: an approach to promote orange fleshed sweetpotato, experiences from Uganda. In 13<sup>th</sup> symposium of ISTRC. Tropical root and tuber crops opportunities for poverty alleviation and sustainable livelihoods in the developing world. Tanzania Commission for Science and Technology (COSTECH, ISTRC, 10-14 November 2003, Arusha, Tanzania 31pp.
- Ugen M. A., Namayanja A., Opio F., Tukamuhabwa P., Ssekabembe R.S., 2003. Participatory evaluation of improved technologies with farmers. The case of bean technologies. Proceedings of the 3<sup>rd</sup> National Agricultural Research Organization Scientific Conference, Kampala International Conference Centre, 4<sup>th</sup> – 7<sup>th</sup> December 2001., Kampala, Uganda. Uganda Journal of Agricultural Sciences, 8(10): 123-130.
- Namayanja A., Ugen M. A., Opio F., Babirye A., Nasirumbi L., Kitinda X., Takusewanya R., Eyedu H., Mukabalanga J., Ssekabembe R., Kabayi P., and Sulume J., 2003. Current bean research at the Biofortification Challenge Programme: A bean planning workshop held 1-3 October 2003, Naivasha, Kenya.
- Opio F., Buruchara R., Takan J. P., Bamuru I., Mudingoto J., Kasenge R., Henrick J., Marthur S. B. and Adipala E. (2003). An overview of the CEP partnership project between DGISP/Danida and the Government of Uganda. Paper presented to the “Good Seed Initiative” Workshop, Morogoro, Tanzania 4-7 June 2003.
- Opio F. (2002). Challenges of and Prospects for Gender Mainstreaming in Agriculture with special reference to Uganda. A paper presented to the 8<sup>th</sup> International Interdisciplinary Congress on Women, Makerere, Kampala Uganda 13pp.
- Opio F., Mugagga I., and Mawejje D., 2002. Progress report on bean anthracnose research in Uganda. A paper presented to Bean Breeders/Pathology working group meeting, Nazreth, Ethiopia, 10pp.
- Opio F., Ugen M., Buruchara R., Kayizzi, Kyamanywa S., Mugagga I., Takusewanya R. and Mawejje D. (2002). Farmers Participatory Development of strategies for integrated management of bean diseases in Uganda. Paper presented to the workshop on Integrated Pest Management, Kampala, Uganda. 21pp.
- Opio A. F., Kayizzi K., Tukamuhabwa P., Kyamanywa S., Buruchara R., Mugagga I., and Takusewanya R., (2001). Development of a management strategy for bean

- root rot in Southwestern Uganda. A paper presented to the NARO Scientific Conference, Kampala, Uganda 18pp.
- Opio F. A., Bua A., Ugen M., Ebong C., Bigirwa G., Mwangi R., Odongo B., Mubiru S., and Semakula G. (2001). Client Orientation of Agricultural Research in Uganda. The Namulonge Experience. Proceedings of the 3<sup>rd</sup> National Agricultural Research Organization Scientific Conference, Kampala International Conference Centre, 4<sup>th</sup> – 7<sup>th</sup> December 2001, Kampala Uganda. Uganda Journal of Agricultural Sciences. 8 (10) 17-28
- Opio A. F., Kayizzi K., Mugagga I., and Takusewanya R., (2001). Research on the management of root rot in South Western Uganda 1995-2001. Paper presented to the Bean millenium workshop, Arusha, May 2001.
- Opio A. F., 1998. Management of bean root rot in Uganda. Paper presented to the 7<sup>th</sup> International congress of plant pathology, Edinburgh, Scotland 9-16 August, 1998.
- Opio A. F., Kyamanywa and Kayizzi 1998. Management of Root rots in South Western Uganda. A progress Report. Paper presented to the 3<sup>rd</sup> Pan African pathology working group meeting, Thika, Kenya 24-29/5/98.
- Opio, A. F., Kyamanywa, Kayizzi and Katwijukye A., 1998. Current status and progress of research on the management of bean root rots complex in South Western Uganda. Paper presented to the NARO Centenary Conference, October 1998.
- Opio A. F., Sengooba T., Kayiwa B. S., Mutetikka M., Niringiye C. and Kikoba E., 1998. Bean research in Uganda. Achievements, impact and challenges for the future. Paper presented to the Uganda National Agricultural Research Organisation (NARO) Centenary Conference, October 1998.
- Kyamanywa S., Wilson Halord, Opio A. F. and Mark Erbaugh, 1998. The effect of seed dressing and earthing up on beanfly (*Ophiomyia* sp) and other pests of beans. In proceedings of third IPM-CRSP symposium 15-18 May 1998, Virginia Tech. Blacksburg USA.
- Tusiime G., Adipala E., Opio A. F. and Bhagsari A. S., 1998. Towards developing an integrated control package for potato bacterial wilt in lowland Uganda. African crop science conference proceedings Vol 3:989-994
- Bua A., Opio A. F. and Adipala E., 1997. Seedborne infection of cowpea seeds by *Xanthomonas campestris* pv. *Vignicola* in Uganda. African crop science proceedings Vol 3:1105-1110.
- Opio A. F., Beatrice M. K., Mutetikka M., Sengooba T. and Tukamuhabwa P., 1995. Technology transfer. Experience of the beans programme in Uganda 1985-1995. Paper presented to the technology transfer workshop, Kampala December, 1995.

- Bua A. B., Opio A. F., and Adipala E., 1995. Evaluation of inoculation techniques for screening cowpea for resistance to bacterial blight. Paper presented to the 2<sup>nd</sup> African Crop Science conference held in Malawi, 19-24 February, 1996.
- Tusiime G., Opio A. F., Adipala E. and Baghsari A. S. 1995. Screening *Solanum* potato genotypes for resistance to *Pseudomonas solanacearum* in Uganda. A preliminary study. Paper presented to the 2<sup>nd</sup> African Crop Science Conference held in Malawi, 19-24 February, 1995.
- Opio A. F. 1995. Progress on studies on floury leaf spot. Paper presented to the 2<sup>nd</sup> Pan African workshop on fungal disease of beans. Kakamega, Kenya, June 1995.
- Fina Opio and S. Male-Kayiwa, (1994). The status of bean breeding in Uganda. In Proceedings of a Regional workshop on Breeding for disease resistance with emphasis to durability in Eastern and Southern Africa (edited Danial L. Daniel) Njoro, Kenya, October 2-6 1994: 110-113.
- Opio A. F., 1994. Studies on Common Bacterial Blight of beans in Uganda. In Proceedings of the 1<sup>st</sup> workshop on viral and bacterial diseases of beans (edited by Bary Simthson) Kampala, Uganda 13-17 June 1994.
- Opio A. F., Teri J. Nn and Allen D. J., 1993. Survival of *Xanthomonas campestris* pv. *Phaseoli* in Uganda. In Africa crop science conference proceedings, vol 1, pp 255-259.
- Nahdy S. M., Odong M. and Opio A. F., 1993. The role of women in post-harvest systems and food security in Uganda. Paper presented to the 1<sup>st</sup> crop science conference for Eastern and Southern Africa, held in Kampala, Uganda, 14-18 June 1993, 18pp.
- Opio A. F. and Musaana S.M., 1993. Collaborative research project on common bacterial blight (*Xanthomonas campestris* pv. *Phaseoli* smith (Dye) of common beans (*Phaseolus vulgaris*). Paper presented to the 3<sup>rd</sup> East African Multi disciplinary Workshop held in Thika, Kenya, April 1992, 10pp.
- Opio A. F., and Sengooba T., 1991. Progress in Bean pathology research in Uganda. In Proceedings of a Workshop on National Research Planning for Bean Production in Uganda (Edited by Grisley W), Kampala, Uganda, January 28-February 1, 1991.
- Opio A. F., Teri J. M. and Allen D. J. (1991). Assessment of Yield Losses caused by Common bacterial blight of beans in Uganda. In proceedings of the 10<sup>th</sup> SUA/CRSP bean Research workshop, Morogoro, Tanzania September 15<sup>th</sup>-18<sup>th</sup> 1991; 105-112pp.
- Musana M.S., and Opio A. F., 1991. Optimum bean production in Uganda with reference to soil, climatological requirements and most suitable varieties for

- market needs. Paper presented during the Seminar on Export of field beans. EPADU. Kampala, Uganda, 7pp.
- Opio A. F., Musaana M. S., 1991. The National Bean Program operations as influenced by the Agricultural policy 7pp. Paper presented to the National Workshop to give the views on the National Science and Technology Policy, UNESCO, Kampala, Uganda, 7pp.
- Opio A. F., Musana S. M., Teri J. M. and Allen D. A., (1990). Research activities on common Bacterial Blight on Beans in eastern Africa. In proceedings of the 9<sup>th</sup> SUA/CRSP Research Workshop and 2<sup>nd</sup> SADCC/CIAT regional Bean Research workshop (Edited by Smithson B) Morogoro, Tanzania 17-20 September 1990, 259-270.
- Musaana S. M. and Opio A. F. (1990): Regional Collaborative Research Project on Common Bacterial Blight (*Xanthomonas campestris* pv. *Phaseoli*) (Smith Dye) of common bean *phaseolus vulgaris*. In proceedings of the 2<sup>nd</sup> East African Bean Workshop (Edited by Smithson B) Nairobi, Kenya, 24-34.
- Opio A. F. and Busolo-Bulafu (1990): Status of Bacterial wilt on groundnuts in Uganda. Paper presented to the ACIAR/ICRISAT collaborative research planning committee, Kuala, Lumpur, Malaysia, 2pp.
- Musaana M. S., Opio F. and I. Kibirige-Sebunya, 1990. Application of interorganism genetics to mutation breeding for disease resistance; The role of a breeder, a pathologist and a physiologist. Paper presented to the 1<sup>st</sup> National Conference on Food and Agriculture, Kampala, Uganda, 9pp.
- Opio A. F. (1988). Host range and Biotypes of *Pseudomonas solanacearum* E.F. Smith in Uganda. A preliminary study. In: Proceedings of 5<sup>th</sup> International Congress of Plant Pathology, Kyoto, Japan 1988, 83-95.
- Opio A. F. (1987). Distribution, prevalence and Economic importance of bacterial blight of beans. 18pp. Proceeding of the 1<sup>st</sup> African Bean Pathology Workshop, Kigali, Rwanda, November, 1987. 31-33.
- Opio A. F. (1987). Beans *Phaseolus vulgaris* L. as symptomless carrier of *Pseudomonas solanacearum* E.F. Smith 10p. In proceedings of the 1<sup>st</sup> Eastern African Bean Workshop (Edited by Kirkby) Mukono, Uganda, 127-133.
- Opio A. F. (1986) Studies on *Pseudomonas solanacearum* E.F. Smith a soil borne pathogen in Uganda. In Proceedings of the 1<sup>st</sup> East African Soil Science Workshop (Edited by Magunda, M.K. and Fenster W.E) Kampala, December 1986, 220-233.
- Opio A. F. and Singh J.P (1979). Epidemiology and control of cowpea rust (*Uromyces phaseoli* var *vignae*) in Kenya. Proceeding of the grain legume improvement workshop in E.A, Kenya, University of Nairobi, 1979, 67-73.

***Membership of National and International Societies***

1. A member of Uganda Academy of Science. She was the Vice Chairperson from 2002 to 2004. She was a member of the Executive Committee and a Fellow of the Academy.
2. A member of African academy of Science
3. Member of African Crop Science Society
4. Member of the Association of African women leaders in Agriculture and environment; Uganda Chapter.
5. Member of Forum for Women Educationists (FAWE); Uganda Chapter.