

CURRICULUM VITAE: PETER FUTI ARAMA

| 1. PERSONAL DETAILS | |
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| Surname | Arama |
| Other names | Peter Futi |
| Date of birth | 13 th October, 1958 |
| Nationality | Kenyan |
| Work place address | Rongo University School of Agriculture, Natural Resources and Environmental Sciences Department of Agricultural Economics and Agribusiness P.O. Box 103 – 40404, RONGO - KENYA |
| Home Address | P.O. Box 3070 – 20100, NAKURU - KENYA |
| Tel (cell) | +254 721 345 608 |
| E-mail | arama.peter58@gmail.com |

| 2. EDUCATIONAL QUALIFICATIONS | | |
|-------------------------------|---|--|
| MONTH/YEAR | QUALIFICATION | INSTITUTION |
| September/ 1996 | Ph.D. (Plant Pathology). Thesis title: “ <i>The effects of cultivar, isolate and environment on disease resistance of wheat to septoria tritici blotch in Kenya</i> ” | Wageningen Agricultural University – The Netherlands |
| December/1989 | M.Sc. (Plant Pathology). Thesis title: “ <i>The influence of temperature on infection of Rhynchosporium secalis on resistant and susceptible barley varieties</i> ” | University of Nairobi - Kenya |
| December/1983 | B.Sc. (Agriculture) (Hons.) | University of Nairobi - Kenya |

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|---------------|--|----------------------------------|
| December/1978 | East African Advanced Certificate of Education (EAACE) | East African Examination Council |
| December/1976 | East African Certificate of Education (EACE) | East African Examination Council |
| December/1972 | Certificate of Primary Education (CPE) | East African Examination Council |

3. OTHER QUALIFICATION/TRAINING

| DURATION AND YEAR | QUALIFICATION | INSTITUTION(S) |
|-------------------------------|--|---|
| August 27 – September 9, 2006 | Certificate in: “ <i>Breeding for Durable Resistance against Specialized Plant Pathogens</i> ” | The Laboratory of Plant Breeding of Wageningen University The Netherlands, Biotechnology Trust Africa and KARI. |
| March 23 – 26, 2006 | Certificate in: “ <i>Oriental Workshop in Open, Distance and e-Learning (ODeL)</i> ” | Maseno University |
| February 6 – 10, 2006 | Certificate in: “ <i>The Implementation of Pesticide Efficacy and MRL Trials in Kenya</i> ” | AGRISEARCH, UK and Pest Control and Products Board, Kenya |
| 2002 – 2004 | Certificate in: “ <i>Development of International Scientific Biosafety Testing Methodology for Transgenic Plants</i> ” | Genetically Modified Organisms – Environmental Risk Assessment (GMO- ERA) Guidelines Project, Switzerland |
| March – April 1999 | Certificate in: “ <i>Insect Pathology</i> ” | CABI Bioscience (UK Centers) |
| January 1997 | Certificate in: “ <i>Scientific Communication Skills</i> ” | University of Edinburgh, UK and KARI |
| August 1989 | Certificate in: “ <i>Statistics. Experimental Designs and Field Plot Techniques</i> ” | KARI |

4. MEMBERSHIP IN PROFESSIONAL ORGANISATIONS/BODIES

| AFFILIATION (YEAR) | ORGANISATION | BENEFITS |
|-----------------------|--|--|
| 2011 | American Phytopathological Society (APS) | Online subscription to the Journals " <i>Phytopathology</i> ", " <i>Plant Disease</i> " and " <i>Phytopathology Newsletter</i> " |
| 2011 | International Association for the Plant Protection Sciences (IAPPS) | Online subscription to the Journal " <i>Crop Protection</i> " |
| 2002 | Core member of Genetically Modified Organisms (GMO) Environmental Risk Assessment (ERA). | Online workshops/conferences |
| 1989 | Plant Pathology Society of Kenya | |

5. EMPLOYMENT HISTORY

| DATE | ORGANISATION | POSITION | REMARKS |
|--------------------------|--|--|------------------------------|
| FROM – TO | | | |
| September 2014 - Present | Rongo University | Head of Department Agricultural Economics and agribusiness | New appointment |
| December 2013- Present | Rongo University | Associate Professor | New appointment |
| May 2007 – December 2013 | Department of Applied Plant Sciences, Maseno University | Senior Lecturer | Promotion |
| November 2003 – May 2007 | Department of Botany and Horticulture, Maseno University | Lecturer | Permanent appointment by MSU |

| 5. EMPLOYMENT HISTORY | | | |
|-------------------------------|--|----------------------------------|---|
| DATE | ORGANISATION | POSITION | REMARKS |
| January 2001 – October 2003 | Kenya Agricultural Research Institute (KARI) | Principal Research Officer (PRO) | Promotion |
| September 1996 – January 2001 | KARI | Senior Resesrch Officer (SRO) | Promotion |
| September 1989 | KARI | Research Officer I (ROI) | Transfer of services from Ministry of Agriculture) |
| July 1986 – August 1989 | Ministry of Agriculture | Research Officer I (ROI) | Promotion |
| July 1983 | Ministry of Agriculture | Research Officer II (ROII) | Employed by the Ministry of Agriculture and posted to National Plant Breeding Reserch Station as Wheat and oilseed Pathologist/ Breeder |

| 6. VISITING SCIENTIST | | |
|------------------------------|--|---|
| DURATION AND YEAR | PROJECT TASK(S) | INSTITUTION(S) |
| March 2001 – December 2002 | Development of Biopesticides for Grasshopper and Locust Control in sub-Saharan Africa | International center of Insect Physiology and Ecology (ICIPE), Nairobi, Kenya |
| July 1987 – July 1988 | Developing protocols for analyzing resistance/ virulence in wheat/ <i>Septoria tritici</i> systems | Research Institute for Plant Protection (IPO) – DLO), Wageningen, The Netherlands |

7. TEACHING ACTIVITIES – UNDERGRADUATE

| CODE | SUBJECT | PROGRAMME |
|------|--|-----------|
| | Agribusiness Incubation | |
| | Integrated Pests and Diseases Management | |
| | Farming Systems | |
| | Postharvest Technology | |
| | Mushroom Production | |
| | Plant Diseases and Disease Control | |
| | Research Projects and Seminars | |
| | Mycology | |
| | Principles of Plant Pathology | |
| | Introduction to Microbiology | |
| | Principles of Plant Breeding | |

8. TEACHING ACTIVITIES – POST GRADUATE

| CODE | SUBJECT | PROGRAMME |
|------|---|-----------|
| | Breeding for Resistance to Diseases and Pests | |
| | Microbial Genetics | |
| | Mycology | |
| | Bacteriology | |
| | Virology | |
| | Horticultural Plant Disorders | |
| | Plant Diseases and Disease Control | |
| | Principles of Plant Pathology | |

9. DEPARTMENTAL RESPONSIBILITIES

| PERIOD | DESCRIPTION |
|--------------------------------|--|
| January 2014 – December 2016 | Chairman University Farm Management Committee (Rongo University College) |
| April 2011 – December 2013 | Member of Departmental Quality Management Systems Committee (Maseno University) |
| March 2005 - December 2013t | Chairman, Departmental Research/Demonstration Field Committee (Maseno University) |
| February 2007 - November, 2010 | Faculty of Science Representative to the Shows and Exhibitions Committee (Maseno University) |

| 10. GRADUATE STUDENT SUPERVISION (PHD) | | | | |
|--|---|-----------|--|--|
| STUDENT | INSTITUTION | YEAR REG. | TITLE OF PROPOSAL/THESIS | REMARKS |
| Jeruto, Pascaline | Jaramogi Oginga Odinga University of Science and Technology | 2010 | Phenetic diversity, phytochemical screening and antimicrobial activity of <i>Senna didymobotrya</i> (fresen.) H. S. Irwin and Barneby | Submitted thesis: to graduate March 2018 |
| Patrick Murerwa | Egerton University | 2001 | Evaluation of entomopathogenic fungal isolates for management of <i>Rhopalosiphum padi</i> and <i>Metopolophium dirhodum</i> in wheat (<i>Triticum aestivum</i>) | Graduated May 2015 |
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| Odhiambo, Jackson Onyuka | Maseno University | 2008 | Evaluation of different methods for controlling fish borne microbes along Lake Victoria basin | Graduated in November 2012 |

11. GRADUATE STUDENT SUPERVISION (MSC)

| STUDENT | INSTITUTION | YEAR REG. | TITLE OF PROPOSAL/THESIS | REMARKS |
|-----------------------|--------------------|-----------|---|-------------------------------------|
| Maina, Collins | Egerton University | 2010 | Title of research proposal: Screening of finger millet (<i>Eleusine coracana</i>) for durable resistance to blast disease (<i>Magnaporthe grisea</i>) in Kenya. | Completed research (analyzing data) |
| Were, John | Maseno University | 2010 | Management of blast disease (<i>Magnaporthe grisea</i>) in Kenya using local isolates of Actinomycetes isolated from different regions | Graduated 2016 |
| Machio Alex Kange | Egerton University | 2012 | Evaluation of pathogens causing mycotoxins in sorghum <i>Sorghum bicolor</i> (L.) Moench growing areas in Kenya | Graduated 2015 |
| Cheruiyot, Duncan | Egerton University | 2011 | Title of research proposal: Evaluation of advanced Kenyan wheat (<i>Triticum aestivum</i> L.) selection for stem rust (<i>Puccinia graminis</i> f.sp. <i>tritici</i>) resistance | Graduated 2014 |
| Otieno, Carren | Maseno University | 2008 | Cultivation of wood ear mushroom <i>Auricularia auricula</i> using agricultural wastes in western Kenya | Graduated in November 2012 |
| Onyango, Benson | Maseno University | 2008 | Phylogenetics of <i>Auricularia auricula</i> and their cultivation using composted agricultural waste products | Graduated 2010 |
| Atieno, Walter Otieno | Maseno University | 2007 | Water clarification and antimicrobial effects of <i>Moringa stenopetala</i> and <i>Moringa oleifera</i> | Graduated 2009 |

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|----------------------|--------------------------|------|---|--|
| Musieba, Fredrick | University of Nairobi | 2003 | Effect of <i>Metarhizium anisopliae</i> and its complementation with Phenylacetonitrile pheromone on reproductive potential and mortality of gregarious nymphs of <i>Schistocerca gregaria</i> | Graduated 2005 |
| Jenina Karungi | ICIPE | 2001 | Specialized training on “ <i>Techniques in Insect Pathology</i> ” | Post Graduate Certificate in Insect Pathology – ICIPE 2001 |
| Roy Bundi Mugiira | Egerton University | 1996 | Occurrence, pathogenicity of <i>Pseudomonas syringae</i> van Hall, the causal agent of bacterial blight of coffee (BBC) and effect of foliarfertilizer formulations on the pathogen ice nucleation activity | Graduated 2000 |

12.RESEARCH ACTIVITIES – PUBLICATIONS

| AUTHORS | YEAR | TITLE | JOURNAL |
|---------|------|-------|---------|
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|--|------|--|---|
| Pascaline Jeruto, Peter Arama , Beatrice Anyango, Regina Nyunja, Catherine Taracha and Sylvia Opiyo | 2017 | Morphometric Study of <i>Senna didymobotrya</i> (Fresen.) H. S. Irwin and Barneby in Kenya | Journal of Natural Sciences Research 7:54-69 |
| Jeruto, P., Arama , P. F. , Anyango, B. and Maroa, G., | 2017 | Phytochemical screening and antibacterial investigations of crude methanol extracts of <i>Senna didymobotrya</i> (Fresen.) H. S. Irwin & Barneby | Journal of Applied Biosciences 114: 11357-11367 |
| Jeruto, P., Arama , P. F. , Anyango, B., Akenga, T., Nyunja, R. and Khasabuli, D. | 2016 | <i>In vitro</i> antifungal activity of methanolic extracts of different <i>Senna didymobotrya</i> (fresen.) H.S. Irwin & Barneby plant parts | African Journal of Traditional, Complementary and Alternative Medicine 13(6): 168-174 |
| Emily Atieno Masinde1, Joshua Ondura Ogendo, Midatharahally N. Maruthi, Rory Hillocks, Richard M.S. Mulwa and Peter Futi Arama | 2016 | Occurrence and estimated losses caused by cassava viruses in Migori County, Kenya | African Journal of Agricultural Research 11(24): 2064-2074 |
| Alex M. Kange, Erick K. Cheruiyot, Joshua O. Ogendo and Peter F. Arama | 2015 | Effect of sorghum (<i>Sorghum bicolor</i> L. Moench) grain conditions on occurrence of mycotoxin-producing fungi | Agriculture and Food Security 4:1-8 |

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| Rory Hillocks, Midatharahally Maruthi, Heneriko Kulembeka, Simon Jeremiah, Francis Alacho, Emily Masinde, Joshua Ogendo, Peter Arama , Richard Mulwa, Geoffrey Mkamilo, Bernadetta Kimata, Davis Mwakanyamale, Albert Mhone and Ibrahim Benesi | 2015 | Disparity between Leaf and Root Symptoms and Crop Losses Associated with Cassava Brown Streak Disease in Four Countries in Eastern Africa | Journal of Phytopathology |
| Mutebi, C.M., Opande, G.O., Arama, P.F. and Buyela, D. | 2015 | Reviewing the Case of Sustainable Management of Water Hyacinth in Lake Victoria, Kenya | Maseno University Journal 1:238-244 |
| Duncan Cheruiyot, Pascal P. Okwiri Ojwang, Peter N. Njau, Peter F. Arama , Godwin K. Macharia | 2014 | Genetic analysis of adult plant resistance to stem rust (<i>Puccinia graminis</i> f. sp. <i>tritici</i>) and yield in wheat (<i>Triticum aestivum</i> L.) | Acta Advances in Agricultural Sciences 2(10): 49-63 |
| P. Murerwa, P. F. Arama , A. W. Kamau and N. K. Maniania | 2014 | Pathogenicity of Fungal Isolates of <i>Metarhizium anisopliae</i> (Metchnikoff) and <i>Beauveria bassiana</i> (Balsamo) against Aphids <i>Rhopalosiphum padi</i> (Linnaeus) and <i>Metopolophium dirhodum</i> (Walker) | Egerton J. Sci. & Technol. Volume 14: 105-119 |
| Murerwa, P., Arama, P.F. , Kamau, A.W. and Maniania, N.K. | 2014 | Effect of infection by <i>Metarhizium anisopliae</i> isolate ICIPE 51 on development stage, fecundity and intrinsic rate of increase of <i>Rhopalosiphum padi</i> and <i>Metopolophium dirhodum</i> | Journal of Entomology and Nematology 6:154-160 |

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|---|------|---|--|
| Alex M. Kange, Erick K. Cheruiyot, Joshua O. Ogendo, Peter F. Arama, Sylvans O. Ochola | 2014 | Pre- and post harvest factors affecting sorghum production (<i>Sorghum bicolor</i> L. Moench) among smallholder farming communities | International Journal of Agronomy and Agricultural Research 5:40-47 |
| Opande, G., Were Okumu and Arama Peter. | 2013 | Use of soil streptomycetes from Maseno (Kenya) to inhibit growth of <i>Pyricularia grisea</i> <i>in vitro</i> cultures. | IOSR Journal of Agriculture and Veterinary Science e-ISSN: 2319-2380, p-ISSN: 2319-2372. 6:1-6 |
| Jackson H. O. Onyuka, Rose Kakai, Peter F. Arama, and Ayub V. O. Ofulla. | 2013 | Comparison of antimicrobial activities of brine salting, chlorinated solution and Moringa oleifera plant extracts in fish in Lake Victoria Basin of Kenya | African Journal of Food, Agriculture, Nutrition and Development 13(3):7772 - 7788 |
| Onyango, B.O., Wagai, S.O., Arama, P.F., Palapala, V., and Gichimu, B | 2011 | Suitability of selected supplemented substrates for cultivation of Kenyan native wood ear mushrooms (<i>Auricularia auricula</i>) | American Journal of Food Technology 6:395-403. |
| Onyango, B.O., Palapala, V., Arama, P.F., Wagai, S.O., and Gichimu, B. | 2011 | Morphological characterization of Kenyan native wood ear mushroom [<i>Auricularia auricula</i> (L. ex Hook) Underw.] and the effect of supplemented millet and sorghum grains in spawn production. | Agriculture and Biology Journal of North America 2:407-414. |
| Atieno, W., Wagai, S., Arama, P., and Ogur, J | 2011 | Antibacterial activity of <i>Moringa oleifera</i> and <i>Moringa stenopetala</i> methanol and n-hexane seed extracts on bacteria implicated in water borne diseases. | African Journal of Microbiology Research 5:153-157. |

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| Jackson H.O. Onyuka, Rose Kakai, David M. Onyango, Peter F. Arama , John Gichuki, and Ayub, V.O. Ofulla. | 2011 | Prevalence and antimicrobial susceptibility patterns of enteric bacteria isolated from water and fish in Lake Victoria basin, western Kenya. | World Academy of Science, Engineering and Technology 75:762-769. |
| Onyango, B.O., Palapala, V., Arama, P.F. , Wagai, S.O., and Otieno, C.A | 2011 | Nutritional analysis of some composted and non composted agricultural substrates used for production of Kenyan native wood ear mushrooms [<i>Auricularia auricula</i> (L. ex Hook) Underw.]. | American Journal of Food Technology 6(9): 804-816. |
| Arama, P.F. , Owido, S.O., Wagai, S.O., Ogur, J.A., Mahagayu, C.M., and Atieno, W.O. | 2011 | Harvesting surface rainwater – purification using <i>Moringa oleifera</i> seed extracts and aluminum sulfate. | Journal of Agricultural Extension and Rural Development. 3(6): 102-112. |
| Mugiira, R.B., Arama, P.F. , Macharia, J.M. and Gichimu, B.M. | 2011 | Antimicrobial activity of foliar fertilizer formulations and their effect on ice nucleation active <i>Pseudomonas syringae</i> pv. <i>garcae</i> (van Hall); the causal agent of bacterial blight of coffee. | International Journal of Agricultural Research 6(7): 550-561. |
| Arama, P.F. , Parlevliet, J.E., and vanSilfhout, C.H. | 2000 | Variation in virulence patterns of <i>Septoria tritici</i> on <i>Triticum aestivum</i> in Kenya. | African Crop Science Journal 8:301-310. |
| Arama, P.F. , Parlevliet, J.E., and vanSilfhout, C.H. | 2000 | Transgressive segregation for resistance in wheat to septoria tritici blotch. | African Crop Science Journal 8:213-222. |
| Arama, P.F. , Parlevliet, J.E. and vanSilfhout, C.H. | 1999 | Heading date and resistance to septoria tritici blotch in wheat not genetically associated. | Euphytica 106:63-68. |
| Arama, P.F. , Parlevliet, J.E. and vanSilfhout, C.H. | 1997 | Effect of plot size and plot situation on the assessment of resistance in wheat cultivars to <i>Septoria tritici</i> . | African Crop Science Journal 3:951-955 |

| 13. RESEARCH ACTIVITIES – PUBLICATIONS (TECHNICAL HANDBOOKS/BOOK CHAPTERS) | | | |
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| AUTHORS | YEAR | TITLE | PUBLISHER |
| Fitt, G.P., Andow, D.A., Carriere, Y., Moar, W.J., Schuler, T.H., Omoto, C., Kanya, J., Okech, M.A., Arama, P., and Maniania, N.K. | 2004 | Chapter 7. Resistance Risks and Management Associated with <i>Bt</i> Maize in Kenya. In: Environmental Risk Assessment of Genetically Modified Organisms. Vol. 1. A Case Study of <i>Bt</i> Maize in Kenya. (Hilbeck, A., and Andow, D.A. Eds.). | CABI Publishing. pp 209-250 |
| Macharia, M., Wangai, A., Wanyera, R., Otondo, H. Arama, P., Malinga, J., Kilonzo, S., Koros, L., Alomba, E., Oduori, J., Tenge, B., Wanyonyi, W., and Limbe, E | 2003 | Crop Protection: In: Crop Production Handbook for Wheat, Oil Crops and Horticulture. 22 nd Edition. (Eds. Kinyua, M.G. and Ochieng, J.A.W.) | KARI Publications. Gansdil Printers, Nairobi, Kenya. p. 10-19. |
| Arama, P.F., Wanjama, J.K., Kiriswa, F. and Macharia, P.K. (Eds.) | 1997 | Crop Production Guidelines for Wheat, Oil Crops and Horticulture. | KARI Publications. 66 p. |

| 14. RESEARCH ACTIVITIES – CONFERENCE PROCEEDINGS | | | |
|---|-----------------------|---------------------------------------|-------------|
| AUTHORS | DESCRIPTION | | YEAR |
| | TITLE OF PAPER | PROCEEDINGS/EDITORS/ VENUE | |

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|--|---|--|------------|
| Arama, P.F. , Owido, S.F.O., Wagai, S.O., Ogur, J.A. and Mahagayu, C.M | Surface water harvesting and purification for livestock and domestic use in small-holder farms in the Lake Victoria region | Research Dissemination Workshop on Water as an avenue to Food Security. The Commission for Higher education. Mombasa, Kenya | June, 2010 |
| Atieno, W.O., Arama, P.F. , Wagai, S.O. and Ogur, J.A. | Water purification and antibacterial effects of <i>Moringa oleifera</i> and <i>Moringa stenopetala</i> plant extracts | 2 nd National Council of Science and Technology Conference. Nairobi, Kenya. | May, 2009 |
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| Arama, P. , Maniania, N, Vaughan, L., Osir, E., and Ouna, E. | Pathogenicity of <i>Metarhizium anisopliae</i> var <i>acridum</i> isolates ICIFE 21 and ICIFE 23 on fourth instar nymphs of desert locust, <i>Schistocerca gregaria</i> (Forsk.). | The Proceedings of the 9 th KARI Scientific Conference. KARI Publications. p 509-512. | 2004 |
| Thagana, W.M., Riungu, TC., Inoti,, S.K., Omolo, E.O., Ndirangu, S.M., Nyakwara, Z.A., Waweru, J.K., and Arama, P. | Introduction and status of <i>Jujube</i> (<i>Simmondsia chinensis</i>) production in Kenya. | The Proceedings of the 9 th KARI Scientific Conference. KARI Publications. p 217-222. | 2004 |
| Mugiira, R.B., Macharia, J.M., and Arama, P.F. | Effects of foliar fertilizer formulations on the bacterial blight of coffee (<i>Pseudomonas syringae</i>) ice nucleation activity. | The Proceedings of the 7 th KARI Scientific Conference. KARI Publications. p 423-426 | 2002 |
| Arama, P.F. , Parlevliet, J.E. and vanSilfhout, C.H. | Evaluation of resistance of selected wheat cultivars to three isolates of <i>Septoria tritici</i> under field conditions. | The 10 th Regional Wheat Workshop for Eastern, Central and Southern Africa. Tanner, D.G. and Payne, T. (Eds.). Addis Ababa, Ethiopia. CIMMYT. P. 385-387. | 1999 |

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| Arama, P.F. , Omunyin, M.E. and Wanjama, J.K. | Occurrence of entomopathogenic fungi and aphinilid parasitoids infecting cereal aphids in Kenya. | The Proceedings of the 6 th KARI Scientific Conference. KARI Publications. p 78-83. | 1999 |
| Arama, P.F. , Parlevliet, J.E. and vanSilfhout, C.H. | Relations between seedling and adult plant resistance to <i>Septoria tritici</i> in selected wheat cultivars | The 9 th Regional Wheat Workshop for Eastern, Central and Southern Africa. Tanner, D.G., Payne, T. and Abdalla, O. (Eds.). Addis Ababa, Ethiopia. CIMMYT. p. 462-467 | 1995 |
| Arama, P.F. , Parlevliet, J.E. and vanSilfhout, C.H. | Effect of plant height and days to heading on the expression of resistance in <i>Triticum aestivum</i> to <i>Septoria tritici</i> in Kenya. | The Proceedings of the 4 th International Workshop on <i>Septoria</i> of Cereals. Arseniuk, E., Czembor, C., and Goral, T. (Eds.). Warsaw, Poland. p. 153-157. | 1994 |
| Arama, P.F. | Breeding and selection of bread wheat for resistance to <i>Septoria tritici</i> | Durability of Disease Resistance. Jacobs, Th. and Parlevliet, J.E. (Eds.). Kluwer Academic Publishers. P. 190-194. | 1993 |
| Arama, P.F. | Occurrence of <i>Pyricularia grisea</i> on barley in Kenya | The 7 th Regional Wheat Workshop for Eastern, Central and Southern Africa. Tanner, D.G. and Mwangi, W. (Eds.). Nakuru, Kenya. CIMMYT. p. 228-229. | 1991 |
| Kiriswa, F.L., Danial, D.L., Nyachiro, J.M. and Arama, P.F. | Screening of wild emmer derivatives for resistance to yellow rust in Kenya. | The 7 th Regional Wheat Workshop for Eastern, Central and Southern Africa. Tanner, D.G. and Mwangi, W. (Eds.). Nakuru, Kenya. CIMMYT. p. 215-221. | 1991 |
| Arama, P.F. , Mukunya, D.M., and Buruchara, R. | Evaluation of barley germplasm for resistance to <i>Rhynchosporium secalis</i> at seedling stage. | The 7 th Regional Wheat Workshop for Eastern, Central and Southern Africa. Tanner, D.G. and Mwangi, W. (Eds.). Nakuru, Kenya. CIMMYT. p. 211-214. | 1991 |
| Kema, G.H.J., vanSilfhout, C.H. and Arama, P.F. | Estudios sobre la virulencia de <i>Septoria tritici</i> en todo el mundo. | Conferencia Regional Sobre la Septoriosis del Trigo. Mexico D.F. CIMMYT. Eds. Kohli, M.M. y vanBeuningen, L.T. p. 120-126. | 1990 |

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| vanSilfhout, C.H., Arama, P.F. and Kema, G.H.J. | International survey of factors of virulence of Septoria tritici. | Septoria of Cereals: Proceedings of the 3 rd International Workshop.. Fried, P.M. (Ed.) Zurich, Switzerland. p. 36-38. | 1989 |
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15. RESEARCH ACTIVITIES – EXTENSION BRONCHURES

| AUTHORS | YEAR | TITLE |
|---|------|--|
| AICAD Kenya Country office | 2012 | <i>Cassava production</i> |
| Owido, S.F.O and Arama, P.F | 2010 | <i>How do you estimate the water you need? Use the following guidelines for your daily needs</i> |
| Owido, S.F.O., Chemelil, M.C., and Arama, P.F | 2010 | <i>Small scale irrigation: Sometimes clever and little ideas can change the world and ensure sustainable food production</i> |
| Owido, S.F.O., and Arama, P.F | 2010 | <i>Surface water is free. Collect it all! Water pans</i> |
| Arama, P., Owido, S., Ogur, J., Wagai, S., and Mahagayu, M.C | 2009 | <i>Drink clean pond/river water: Use Moringa</i> |

15. COMMUNITY ENGAGEMENT

| YEAR | DESCRIPTION |
|------|--|
| 2016 | Appointed Management Board Member, Nyaraga Sub County Hospital, Migori County |
| 2011 | Donation of 30 chairs worth KSh. 30,000 to ACK Masara Parish, Migori County. December 2011. |
| 2010 | Donation of Computer and Printer worth Sh. 41,000 to Tumaini Integrated Secondary School. Molo, Nakuru County. NB. The school strives to integrate physically challenged students with other students in their learning. |

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| 2007 to present | Patron, Arombe Community Water Project, Migori County. Sourced for donor in the name of Engineers Without Borders, San Francisco Chapter, USA and EWB Kenya Chapter. Project estimated to cost KSh. 18,000,000 when completed. Borehole already drilled and tested in August 2012. Hand pump to be installed in December 2012. |
| 2006 | Donation of English Literature text books worth Sh. 43,000 to Horace Ongili High School, Sawagongo, Siaya County. |
| 2006 - 2011 | Paying School Fees for TWO needy bright children in High School (at Larmudiac High School and Tumaini Integrated Secondary School respectively), Nakuru County. |
| 1997 to present | Member of Management Committee Arombe Community Dispensary, Migori County. Initiated the construction of the dispensary in 1997. It is currently functional with the government having posted a Public Health Officer, three nurses, a Laboratory technician and provision of medical supplies. |

16. GRANTS & AWARDS (RESEARCH & TEACHING)

| DURATION | FUNDING INSTITUTION | COLLABORATORS | DESCRIPTION | AMOUNT |
|-------------------------|---|---|--|------------------|
| 2017-2020 | Master Card Foundation - RUFORUM Community Action Research Programme PLUS (CARP+) | Egerton University, Rongo University, Baraka Technical College of Agriculture, KALRO – Njoro Center | Fostering innovations in the cassava value chain for improved food, nutrition and income security of smallholder farmers in the ASALs of Nakuru County | KES 20,000,000 |
| 2012-2015 | African Union (AU) | Natural Resources Institute, UK, Egerton University, Tanzania Food and Nutrition Centre (TFNC), Department for Agricultural Research and Technical Services (DARS), Malawi; Naliendele Agricultural Research Institute (NARI), Tanzania, Rongo University | Limiting the impact of Cassava Brown Streak Disease on smallholders, women and the cassava value chain (LimitCBS) | € 620,893 |
| 2012 - 2015 | Eastern Africa Agricultural Productivity Project (EAAPP) | Egerton University, Maseno University, KARI | Quality post-harvest handling, value addition and marketing of cassava products for food security and wealth creation | KESH. 45,000,000 |
| Oct 2011 – Sept 2012 | National Council for Science and Technology | Maseno University, Egerton University and KARI | Surface rainwater harvesting and utilization for domestic use in the small-holder farms in the Lake Victoria region | KESH 982,000 |
| March 2011 – March 2012 | African Institute for Capacity Development (AICAD) | Maseno University, AICAD | Cassava Project: Knowledge and Technology Dissemination Program | KESH 1,640,000 |

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| April 2009 – Oct. 2010 | Commission for Higher Education | Maseno University, Egerton University and KARI | Surface rainwater harvesting for irrigation and livestock utilization and purification for domestic use in the small-holder farms in the Lake Victoria region | KESH 2,980,698 |
| 2005 – 2009 | AICAD | Maseno University and Egerton University | Introduction of African cassava mosaic disease resistant cultivars to subsistence farmers in western Kenya and the potential for the management of sweet potato white fly (<i>Bemisia tabaci</i>) disease vectors using entomopathogenic fungi | US \$ 20,000 |
| 1998-2000 | KARI agricultural Research Fund | KARI | Control of wheat aphids using entomopathogenic fungi | KES 2,000,000 |
| 1991-1995 | Directorate for International Cooperation (DGIS), The Netherlands, and CIMMYT | Volcani Center, Israel, Wageningen agricultural University, KARI | Improvement of wheat resistance to Yellow rust from wild emmer (<i>Triticum diccoccoides</i>) wheat | US \$ 150,000 |
| 1990-1996 | Directorate for International Cooperation (DGIS), The Netherlands | Wageningen Agricultural University and KARI – Njoro center | Durable resistance for Septoria diseases of wheat | US \$ 560,000 |