

Academic Staff Profile Template

1.1 Personal Profile

1.1.1 Personal Details

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| <p>Name: Wilson M. Thagana Title/Qualification: PhD Department: Agricultural Science and Technology (AST) Designation/Position: Senior Lecturer Email: wtmuriithi@gmail.com; thagana.wilson@ku.ac.ke Contact Address: Kenyatta University, 43844-00100, Nairobi, Kenya Area of Specialization: - Plant Breeding & Biotechnology Research Interests: - Application of Biotechnological Tools in Crop Improvement, - Breeding for Drought and Salinity Tolerance</p> <p>Google Scholar: https://scholar.google.com/citations?user=1nMEZ1AAAAAJ&hl=en&oi=ao</p> <p>ORCID ID: https://orcid.org/0000-0001-7188-9132</p> |  |
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1.1.2 Academic & Professional Qualifications

- **PhD (Plant Breeding):** 2009 Egerton University, **Kenya.**
- **MSc (Experimental Plant Morphogenesis):** 1992 University of Calgary, **Canada.**
- **BSc (Agriculture):** 1983 University of Nairobi, **Kenya.**
- Certificate in Chickpea Breeding and Seed production: 2009 **ICRISAT, Patancheru, India.**
- Certificate in Molecular Marker Techniques for Development of Improved Crop Varieties: 2006 IAEA/AFRA/ARC-LNR, at **Roodeplaat, Pretoria, South Africa.**
- Certificate in Sunflower Breeding: 1996 World Bank/Ministry of Agriculture at the Directorate of Oilseed Research (DOR), **Hyderabad, India.**

1.1.3 Employment History

- **25/2/2017 to date: Director,** Kitui Campus, Kenyatta University
- **24/08/2017 to 30/9/2019: Chairman,** Agricultural Science and Technology
- **18/03/2015 to date: Senior Lecturer,** Kenyatta University
- **18/01/2010 to 18/03/2015: Lecturer,** Kenyatta University
- **2001-2010: Senior Research Officer,** Kenya Agricultural and Livestock Research Institute (KALRO)
- **1993-2001: Research Officer I,** KALRO-Njoro
- **1983-1993: Research Officer II,** KEPHIS-Lanet

1.1.4 Achievements

1. **23rd to 26/2/2014:** Awarded US \$ 1,704 to attend Guelph East Africa Workshop by Kenyatta University/University of Guelph, Canada at **Serena Hotel, Dar es Salaam, Tanzania.**
2. **2011:** Awarded US \$120 for Best idea on Water harvesting by Kenyatta University Management.

3. **24th to 25th February, 2011:** Financial support to attend EASCOM AGM, **Entebbe, Uganda**
4. **6/01 to 5/02/2009:** Awarded Fellowship by ICRISAT to attend training on Chickpea Breeding and Seed Production at **ICRISAT, Patancheru, India.**
5. **21/9-30/9/2008:** Awarded fellowship to attend Jojoba Breeding and Production by Kenya Agricultural Productivity Project (**KAPP**) at the Association of the Rajasthan Jojoba Plantation Research Project (AJORP) **Jaipur, Rajasthan, India.**
6. **2008:** Awarded US\$ 400 for the **Best Paper** in Horticulture and Industrial Crops by the Secretariat of the 11th KARI Scientific conference..
7. **2006:** Awarded US\$ 145 for the **Best Paper** in Biotechnology by the Secretariat of the 10th KARI Scientific conference.
8. **14/8-1/9/2006:** Fellowship for a course on “Molecular Marker Techniques for Development of Improved Crop Varieties” by IAEA/AFRA/ARC-LNR, at **Roodeplaat, Pretoria, South Africa.**
9. **3-14/10/2005:** Fellowship to attend training on “Marker Assisted Selection and Mutation Breeding” by IAEA at KARI, Njoro, Kenya.
10. **16/2-27/2/2004:** Fellowship to attend training on “Advances in Molecular Characterization for Crop Improvement” by IAEA at KARI, Njoro, Kenya.
11. 2002: Awarded US 1,000 to attend International Sunflower Association Conference in **Johannesburg, South Africa.**
12. 1999: Sponsorship by KARI to attend International Sunflower Association Conference in **Maputo, Mozambique.**
13. 18/9-18/11/96: Fellowship to attend Sunflower Breeding Course by World Bank/Ministry of Agriculture **at the Directorate of Oilseed Research (DOR), Hyderabad, India.**

1.2 Publications

1.2.1 Referred Journals

1. Gimase, J.M, Thagana, W.M, Omondi, C.O, Cheserek, J.J, Gichimu B.M, Gichuru, E.K, Ziyomo, C and C.H. Sneller. (2020). Genome – Wide Association Study identify the Genetic Loci Conferring Resistance to Coffee Berry Disease (*Colletotrichum Kahawae*) in *Coffea arabica* var. Rume Sudan. Euphytica (2020)16:86: 1-17.
2. Nyaga, C, Gowda M, Beyene, Y, Muriithi, W.T, Burgueno. J, Toledo, F, Makumbi, D, Olsen, M.S, Das, B, Suresh, L.M, Bright, J.M and B.M. Prasanna, (2020). Hybrid Breeding for MLN Resistance: Heterosis, Combining Ability, and Hybrid Prediction. Plants 2020,9,468:1-15.
3. Gimase, J.M, Thagana, W.M, Omondi, C.O and J.M. Ithiru, (2019). Evaluation of Coffee Berry Disease Resistance (*Colletotrichum Kahawae*) in F₂ Populations Derived from Arabica Coffee Varieties Rume Sudan and SL 28. Journal of Plant Breeding and Crop Science 11(9): 225-233.

4. Nyaga, C, Gowda M, Beyene, Y, Muriithi, W.T, Olsen, M.S, Suresh, L.M, Makumbi,D, Jumbo, M.B, Das,B and B.M. Prasanna, . (2019). Genome-Wide Analyses and Prediction of Resistance to MLN in Large Tropical Maize Germplasm. *Genes* 2020,11,16;doi:10.3390/genes: 1-16
5. Wakhanu, J, Nyambaka, H, Kimiywe, J, Nawiri, M and W.M. Thagana. (2019). Consumption of African Indigenous Vegetables Improves Children's Body Fat Free Mass in Machakos County, Kenya. *Journal of Food Science and Engineering* 9: 305-319. doi: 10.17265/2159-5828/2019.08.002
6. Gimase, J.M, Thagana, W.M, Omondi, C.O and J.M. Ithiru. (2019). Evaluation of Coffee Berry Disease Resistance (*Colletotrichum kahawae*) in F₂ Populations Derived from Arabica Coffee Varieties Rume Sudan and SL 28. *Journal of Plant Breeding and Crop Science* 11(9): 225-233 ISSN 2006-9758.
7. Henga, S.A, Thagana, W.M and M.W. Githendu. (2019). Rice Seedlings, Vegetative Growth and Vigour as Influenced by Seed Storage Period. (2019). *African Journal of Education, Science and Technology* 5(2): 92-100.
8. Henga, S.A, Thagana, W.M and M.W. Githendu. (2019). Assessing Seed Vigor Characters of Selected Rice (*Oryza sativa* L.) Genotypes Using Accelerated Ageing Method. *Asian Journal of Agricultural and Horticultural Research* 4(3): 1-5.
9. Ndung'u, F.W, Thagana, W.M and D.K. Ndung'u. (2019). Yield of the Testcrosses across the Different Environments. *International Journal of Agriculture* 4(1): 15-27 ISSN 2520-4629.
10. Ndung'u, F.W, Thagana, W.M and D.K. Ndung'u. (2019). Heterotic Orientation of the Inbred Lines. *International Journal of Agriculture* 4(1): 1-14 ISSN 2520-4629.
11. Kariithi Tabitha, Thagana Wilson and P. Gweyi-Onyango Joseph (2018). Influence of Organic and Inorganic Manures on Macro-Nutrients, Micro-Nutrients and Anti-Nutrients in two Amaranth spp in Kiambu County, Kenya. *Asian Journal of Research in Crop Science* 1(1): 1-17.
12. Kirui, K.R, Kibe, A.M, Wagara, I.N, Thagana, M.W. (2017). Effects of Thiram and Carbendazin Application Rates on Growth and Grain Yield of Chick Pea (*Cicer arietinum*) in Kenya. *World Journal of Agricultural Research* 5(6): 284-291. DOI: 10.12691/wjar-5-6-1
13. Kirui, K.R, Kibe, A.M, Wagara, I.N, Thagana, M.W. (2016). Effect of Genotype Resistance and Fungicide Rates on Fusarium Wilt Incidence of Chickpea. *Adv. Plants Agric Res.* 5(5): 624-628. DOI: 10.15406/apar.2016.05.00193
14. Thagana, W.M., 2016, [Appropriate Plant Growth Regulators and Genotypes for Propagation of Jojoba \(*Simmondsia chinensis* L.\)](#) *International Journal of Current Research (IJCR)* 8(1): 24876-24882 ISSN: 24876-24882. (Online).
15. Thagana, W.M. 2016 [Effect of some Agricultural Practices on Field Performance of Jojoba \(*Simmondsia Chinensis* L.\) Seedlings in Semi-Arid Areas of Voi, Kenya](#) *Merit Res. Agric. Sci. soil Sci.* 4(1): 014-022 ISSN: 2,350-2,274 (Online)

16. Thagana, W.M. 2016 [Assessment of Sweet Potato Propagules for Re- infection by Various Viruses in East Kamagak Location – Homa Bay County-Kenya](#) *American Journal of Experimental Agriculture (AJEA)* 11(1): 1-9 Article no.AJEA.21,868 ISSN: 2,231-0606 (Online)
17. Thagana, W.M. 2015 [Yield and Nutritive Attributes Are Not Considered by Farmers in Choice of Sweet Potato Varieties Grown in East Kamagak Location –Homabay County-Kenya.](#) *The International Journal of Technoledge* 3(9): 69-73 ISSN: 2,321-919X (Online)
18. Thagana, W.M., 2015, [Sex Determination of Young Nursery Jojoba \(Simmondsia Chinensis L\) Plants using Morphological Traits in Semi-Arid Areas of Voi, Kenya.](#) *Journal of Biology, Agriculture and Healthcare* 5(16): 113-123 ISSN 2,224-3,208 (Paper) ISSN 2,225-093X (Online)
19. Thagana, W.M. 2015 [Studies on Seed Size and Storage on Germination and Performance of Young Jojoba \(Simmondsia Chinensis L\) Seedlings in Semi-arid Areas of Kenya,](#) *Agriculture and Healthcare* 5(12): 10-16 ISSN 2,224-3,208 (Paper),ISSN 2,225-093X (Online)
20. Thagana, W.M., 2014, [Beverage Quality and Biochemical Attributes of Arabusta \(C. arabica x C canephora P.\) and their Parental Genotypes,](#) *African Journal of Food Science,* ISBN: 8(9): 456-464
21. Thagana,W.M., 2014, [Genetic Characterization of Arabusta Coffee Hybrids and Their Parental Genotypes using Molecular Markers ,](#) *Plant Cell Biotechnology and Molecular Biology,* ISBN 15(1&2):31-42, Available online at: <http://www.ikpress.org/abstract.php?iid=429&id=34&aid=3559#.VBr3QvmSyho>
22. Thagana W.M., 2013, [Seed Abortion and Numerical Components of Seed Yield of Soyabean \(Glycine max L. Merr.\) in Three Contrasting ,](#) *J. Agri. Sci.,* ISBN 4(1):1-5.
23. Momo J.A. and Thagana W.M., 2013, [Effect of withholding Irrigation Water after complete Heading on Rice Yield and Components in Mwea-Kenya,](#) *J. Agri. Sci.,* ISBN 4(2):69-75
24. Thagana W.M., 2013, [Variability in M2 Generations and Characteristics of Advanced Mutant lines of Rapeseed \(Brassica napus L.\),](#) *J. Agri. Sci.,* ISBN 4(2):83-86
25. Thagana W.M., 2009, Heterosis in hybrids derived from cultivars and mutant lines of rapeseed (Brassica napus L.), PhD thesis
26. Thagana W.M., 2007,Performance of rapeseed (Brassica napus L.) hybrids and parental mutant lines in three environments, Egerton journal
27. Muriithi, W.T.,Indra, S. H.,Yeung,E.C. & Thorpe,T.A., 1993,Plantlet regeneration in Chir Pine (*Pinus roxburghii* Sarg.): Morphogenesis and Histology. *Forest Ecology and Management,* 57: 141-160.
28. Thagana W.M., 1992, Plantlet Regeneration and Bud Developmental Anatomy of *Pinus roxburghii*, Sarg. MSc Thesis
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1.2.2 Books and Books Chapters

1. Thagana W.M., 2016, KST 209: Principles of Crop Improvement, DSVOL Module
2. Thagana W.M., 2016, KST 206: Principles of Agricultural Biotechnology, DSVOL Module
3. Thagana W.M., 2014, KST 130: Field Course, DSVOL Module

4. Thagana W.M., 2014, KST 813: Agricultural Biotechnology, DSVOL Module
5. Thagana W.M., 2014, KST 835: Utilization of Plant Genetic Resources, DSVOL Module
6. Thagana W.M., 2014, KST 845: Population and Quantitative Genetics, DSVOL Module
7. Thagana W.M., 2014, KST 850: Seed Physiology and Biotechnology, DSVOL Module
8. Thagana W.M., 2011, KST 832: Plant Biotechnology and Molecular Biology, DSVOL Module
9. Thagana W.M., 2010, KST 513: Agricultural Biotechnology, DSVOL Module.

1.2.3 Conference/Workshops/Seminar Papers

1. Thagana, W.M., Identification of SSR Markers associated with Cassava Mosaic Disease in Kenya ASACSES conference, ECOWAS Parliament Building, Abuja, Nigeria 2nd -5th November, 2015
2. Thagana, W.M. Envisaged MSc Postharvest Technology Curriculum at Kenyatta University Kyambogo University, Kampala, Uganda 5th-9th August, 2015
3. Thagana W.M., Efficacy of a Local and Commercial Rooting powder on Roses, 1st School of Agriculture Biennial International Conference sponsored by KU/AGRA/DAAD/UoN, Kenyatta University, Nairobi, Kenya, 1st -5th December, 2014
4. Thagana W.M., Effects of Withholding Irrigation Water after Complete Heading on Seed Quality Traits in Mwea, 1st School of Agriculture Biennial International Conference sponsored by KU/AGRA/DAAD/UoN, Kenyatta University (KU), Nairobi, Kenya, 1st -5th December, 2014
5. Thagana, W.M., Targeted Plant Breeding, KARI-Thika/Kenya, 1/11/13
6. Thagana, W.M., Effect of Seed Size on Germination and Early Growth of Jojoba in Semi-arid Areas of Kenya, 11th African crop Science Society Conference. Imperial Botanical Beach Hotel, Entebbe-Uganda. 13th -17th October 2013.
7. Thagana, W.M., Enhancing Cassava Productivity Through Host plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease using Genetic Engineering and Marker Assisted Selection-a Kenyan project, Arusha/Tanzania, 28/1/13 -1/02/13
8. Thagana, W.M., Effect of Withholding Irrigation Water after Complete Heading on Rice Yield and Components in Mwea, Kenya, 11th African crop Science Society Conference. Imperial Botanical Beach Hotel, Entebbe-Uganda. 13th -17th October 2013.
9. Thagana, W.M., Characterization of Arabusta (*Coffea arabica* L. x *Coffea canephora* Pierre) Coffee and its Parental Genotypes using Molecular Markers, 11th African crop Science Society Conference. Imperial Botanical Beach Hotel, Entebbe-Uganda. 13th -17th October 2013.
10. Thagana, W.M., Effect of Genotype, Plant Spacing and Weeding Regimes on Weed Density and Yields of Upland Rice in Uganda. 11th African crop Science Society Conference. Imperial Botanical Beach Hotel, Entebbe-Uganda. 13th -17th October 2013.

11. Thagana, W.M., Enhancing Cassava Productivity Through Host plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease using Genetic Engineering and Marker Assisted Selection-a Kenyan project. Arusha/Tanzania. 28/1/13 -1/02/13
12. Thagana, W.M., Occurrence of seed abortion and numerical components of seed yield of soyabean (*Glycine max* L. Merr.) in three contrasting environments. El Minia/Egypt, 25th-29th March, 2012
13. Thagana, W.M., Characterization of Sweet Potato [*Ipomea batatas* (L)] Landraces using Morphological and DNA markers in East Kamagak Location of Rachuonyo District, Bondo University College (BUC), Bondo, Kenya. 4th-7th December 2012.
14. Thagana W.M., Commercialization and Utilization of Jojoba (*Simmondsia chinensis* [Link] Schneider) as a basis for Industrialization and Income Generation in ASALs, UniBRAIN/PanAAC Fair, Hilton Hotel, Nairobi, 26th-27th Nov, 2010
15. Thagana, W.M., Selection and characterization of superior bushes of Jojoba (*Simmondsia chinensis* [Link] Schneider) for ASALs in Kenya. Nairobi, 7th-9th April, 2010
16. Thagana, W.M., Chickpea - a promising new food legume crop for drought prone cool areas of Kenya. Cape Town/South Africa 2009
17. Thagana, W.M., Comparison of phenotypic characters of mutant lines of rapeseed (*Brassica napus* L) with the original parents. Nairobi/Kenya, 2008
18. Thagana, W.M., *In vitro* embryo culture and immature seed germination techniques for rapid generation advance in soyabean [*Glycine max* (L.) Merrill], Nairobi/Kenya, 2006
19. Thagana, W.M., Variability in M2 generations and characteristics of selected advanced mutant lines of rapeseed. 2006
20. Thagana, W.M., Characterization and genetic relationships of rapeseed (*Brassica napus* L.), Entebbe/Uganda, 2005
21. Thagana, W.M., Introduction and status of Jojoba *Simmondsia chinensis* (Link) Schneider production in Kenya. Nairobi/Kenya, 2004.
22. Thagana, W.M., Genotype-environment interactions and stability estimates for sunflower (*Helianthus annuus* L.) varieties grown in diverse environments in Kenya. Johannesburg/ South Africa. 2002.
23. Thagana, W.M., Holistic approach in the dissemination of technologies in Lare division, Nakuru district, Egerton university/Kenya. 2001
24. Thagana, W.M., The status of Kenya in the Global production and supply of oilseed and oilseed products. Nairobi/Kenya. 2000.

1.2.4 Student Co-authored Publications

1. Gimase, J.M, Thagana, W.M, Omondi, C.O, Cheserek, J.J, Gichimu B.M, Gichuru, E.K, Ziyomo, C and C.H. Sneller. (2020). Genome – Wide Association Study identify the

Genetic Loci Conferring Resistance to Coffee Berry Disease (*Colletotrichum Kahawae*) in Coffee arabica var. Rume Sudan. *Euphytica* (2020)16:86: 1-17.

2. Nyaga, C, Gowda M, Beyene, Y, Muriithi, W.T, Burgueno. J, Toledo, F, Makumbi, D, Olsen, M.S, Das, B, Suresh, L.M, Bright, J.M and B.M. Prasanna, (2020). Hybrid Breeding for MLN Resistance: Heterosis, Combining Ability, and Hybrid Prediction. *Plants* 2020,9,468:1-15.
3. Gimase, J.M, Thagana, W.M, Omondi, C.O and J.M. Ithiru, (2019). Evaluation of Coffee Berry Disease Resistance (*Colletotrichum Kahawae*) in F₂ Populations Derived from Arabica Coffee Varieties Rume Sudan and SL 28. *Journal of Plant Breeding and Crop Science* 11(9): 225-233.
4. Nyaga, C, Gowda M, Beyene, Y, Muriithi, W.T, Olsen, M.S, Suresh, L.M, Makumbi, D, Jumbo, M.B, Das, B and B.M. Prasanna, . (2019). Genome-Wide Analyses and Prediction of Resistance to MLN in Large Tropical Maize Germplasm. *Genes* 2020,11,16;doi:10.3390/genes: 1-16
5. Wakhanu, J, Nyambaka, H, Kimiywe, J, Nawiri, M and W.M. Thagana. (2019). Consumption of African Indigenous Vegetables Improves Children's Body Fat Free Mass in Machakos County, Kenya. *Journal of Food Science and Engineering* 9: 305-319. doi: 10.17265/2159-5828/2019.08.002
6. Gimase, J.M, Thagana, W.M, Omondi, C.O and J.M. Ithiru. (2019). Evaluation of Coffee Berry Disease Resistance (*Colletotrichum kahawae*) in F₂ Populations Derived from Arabica Coffee Varieties Rume Sudan and SL 28. *Journal of Plant Breeding and Crop Science* 11(9): 225-233 ISSN 2006-9758.
7. Henga, S.A, Thagana, W.M and M.W. Githendu. (2019). Rice Seedlings, Vegetative Growth and Vigour as Influenced by Seed Storage Period. (2019). *African Journal of Education, Science and Technology* 5(2): 92-100.
8. Henga, S.A, Thagana, W.M and M.W. Githendu. (2019). Assessing Seed Vigor Characters of Selected Rice (*Oryza sativa* L.) Genotypes Using Accelerated Ageing Method. *Asian Journal of Agricultural and Horticultural Research* 4(3): 1-5.
9. Ndung'u, F.W, Thagana, W.M and D.K. Ndung'u. (2019). Yield of the Testcrosses across the Different Environments. *International Journal of Agriculture* 4(1): 15-27 ISSN 2520-4629.
10. Ndung'u, F.W, Thagana, W.M and D.K. Ndung'u. (2019). Heterotic Orientation of the Inbred Lines. *International Journal of Agriculture* 4(1): 1-14 ISSN 2520-4629.
11. Kariithi Tabitha, Thagana Wilson and P. Gweyi-Onyango Joseph (2018). Influence of Organic and Inorganic Manures on Macro-Nutrients, Micro-Nutrients and Anti-Nutrients in two Amaranth spp in Kiambu County, Kenya. *Asian Journal of Research in Crop Science* 1(1): 1-17.
12. Kirui, K.R, Kibe, A.M, Wagara, I.N, Thagana, M.W. (2017). Effects of Thiram and Carbendazim Application Rates on Growth and Grain Yield of Chick Pea (*Cicer arietinum*) in Kenya. *World Journal of Agricultural Research* 5(6): 284-291. DOI: 10.12691/wjar-5-6-1

13. Kirui, K.R, Kibe, A.M, Wagara, I.N, Thagana, M.W. (2016). Effect of Genotype Resistance and Fungicide Rates on Fusarium Wilt Incidence of Chickpea. *Adv. Plants Agric Res.* 5(5): 624-628.DOI: 10.15406/apar.2016.05.00193
14. Thagana, W.M.,2016,Appropriate Plant Growth Regulators and Genotypes for Propagation of Jojoba (*Simmondsia chinensis* L.) International Journal of Current Research (IJCR) 8(1): 24876-24882 ISSN: 24876-24882 (Online)
15. Thagana, W.M. 2016 Effect of some Agricultural Practices on Field Performance of Jojoba (*Simmondsia Chinensis* L.) Seedlings in Semi-Arid Areas of Voi, Kenya Merit Res. Agric. Sci. soil Sci. 4(1): 014-022 ISSN: 2,350-2,274 (Online)
16. Thagana, W.M. 2016 Assessment of Sweet Potato Propagules for Re- infection by Various Viruses in East Kamagak Location – Homa Bay County-Kenya American Journal of Experimental Agriculture (AJEA) 11(1): 1-9 Article no.AJEA.21,868 ISSN: 2,231-0606 (Online)
17. Thagana, W.M. 2015 Yield and Nutritive Attributes Are Not Considered by Farmers in Choice of Sweet Potato Varieties Grown in East Kamagak Location –Homabay County-Kenya. The International Journal of Technoledge 3(9): 69-73 ISSN: 2,321-919X (Online)
18. Thagana, W.M., 2015, Sex Determination of Young Nursery Jojoba (*Simmondsia Chinensis* L) Plants using Morphological Traits in Semi-Arid Areas of Voi, Kenya. Journal of Biology, Agriculture and Healthcare 5(16): 113-123 ISSN 2,224-3,208 (Paper) ISSN 2,225-093X (Online)
19. Thagana, W.M. 2015 Studies on Seed Size and Storage on Germination and Performance of Young Jojoba (*Simmondsia Chinensis* L) Seedlings in Semi-arid Areas of Kenya, Agriculture and Healthcare 5(12): 10-16 ISSN 2,224-3,208 (Paper),ISSN 2,225-093X (Online)
20. Thagana, W.M., 2014, Beverage Quality and Biochemical Attributes of Arabusta (*C. arabica* x *C canephora* P.) and their Parental Genotypes, African Journal of Food Science,ISBN: 8(9): 456-464
21. Thagana,W.M., 2014, Genetic Characterization of Arabusta Coffee Hybrids and Their Parental Genotypes using Molecular Markers , Plant Cell Biotechnology and Molecular Biology, ISBN 15(1&2):31-42, Available online at: <http://www.ikpress.org/abstract.php?iid=429&id=34&aid=3559#.VBr3QvmSyho>

1.2.5 Other Publications

1. Thagana W.M., 2003. Make More Money Grow Sunflower-Technology Dissemination Leaflet.

1.3 Research

1. **2017-2020:** PhD-Pyramiding of Genes for Conferring Resistance to Coffee Berry Disease (*Colletotricum kahawae*) in *Coffea arabica* L. Using Marker Assisted Selection.
2. **2017-2018:** Commercialization of Locally Developed Agricultural Inputs-Foliar Fertilizers, Hydroponic Nutrient Solutions and Rooting, Powders.

3. **2017-2020:** Development of Net Blotch Resistant Doubled Haploid Genotypes of Barley by Chromosome Elimination using Bulbosum Technique.
4. **2016-2018:** Fingerprinting and Relating Juvenile Characters of Rice to Yield and Its Components.
5. **2014-15:** Nutrition-sensitive Intervention with African Leafy Vegetables to Improve Nutrition Status of School Going Children in Kenya.
6. **2012-15:** Enhancing Cassava Productivity Through Host Plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease.
7. **2011-12:** Characterization of Sweet Potato (*Ipomea batatas* [L.] Lam) Landraces Using Morphological and DNA Markers in East Kamagak Location of Rachuonyo District.
8. **2008-2010:** Enhancing Chickpea Productivity and Production in Drought-Prone Areas of sub-Saharan Africa and South Asia.
9. **2008-09:** Commercialization and utilization of Jojoba in ASALS.
10. **1993-2009:** Oilseed breeding KALRO-Njoro.
11. **1983-1993:** Seed certification, maize and sorghum research, KEPHIS-Lanet.

1.4 Funded Projects

1. **2017-2020:** PhD-Pyramiding of Genes for Conferring Resistance to Coffee Berry Disease (*Colletotricum kahawae*) in *Coffea arabica* L. Using Marker Assisted Selection, NRF. US\$ 6,000.
2. **2017-2018:** Commercialization of Locally Developed Agricultural Inputs-Foliar Fertilizers, Hydroponic Nutrient Solutions and Rooting, Powders, Kenyatta University Vice Chancellors' Research Grant Call 2016. US\$ 11,000
3. **2017-2020:** Development of Net Blotch Resistant Doubled Haploid Genotypes of Barley by Chromosome Elimination using Bulbosum Technique, NRF. US\$ 20,000.
4. **2016-2019:** Fingerprinting and Relating Juvenile Characters of Rice to Yield and Its Components, NACOSTI US\$ 8,000.
5. **2014-15:** Nutrition-sensitive Intervention with African Leafy Vegetables to Improve Nutrition Status of School Going Children in Kenya, Kenyatta University Vice Chancellors' Research Grant Call 2013. US\$ 16,666.
6. **2012-15:** Enhancing Cassava Productivity Through Host Plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease, EAAPP. US\$ 264,677.
7. **2011-12:** Characterization of Sweet Potato (*Ipomea batatas* [L.] Lam) Landraces Using Morphological and DNA Markers in East Kamagak Location of Rachuonyo District, NCST. US\$ 2,169.
8. **2008-2010:** Enhancing Chickpea Productivity and Production in Drought-Prone Areas of sub-Saharan Africa and South Asia, Bill & Melinda Gates. US\$ 106,830.
9. **2008-09:** Commercialization and utilization of Jojoba in ASALS, KAPP. US\$ 100,000.

1.5 Conferenced/Workshops/Seminars Attended

1. Thagana, W.M., Identification of SSR Markers associated with Cassava Mosaic Disease in Kenya ASACSES conference, ECOWAS Parliament Building, Abuja, Nigeria 2nd -5th November, 2015
2. Thagana, W.M. Envisaged MSc Postharvest Technology Curriculum at Kenyatta University Kyambogo University, Kampala, Uganda 5th-9th August, 2015
3. Thagana W.M., Efficacy of a Local and Commercial Rooting powder on Roses, 1st School of Agriculture Biennial International Conference sponsored by KU/AGRA/DAAD/UoN, Kenyatta University, Nairobi, Kenya, 1st -5th December, 2014
4. Thagana W.M., Effects of Withholding Irrigation Water after Complete Heading on Seed Quality Traits in Mwea, 1st School of Agriculture Biennial International Conference sponsored by KU/AGRA/DAAD/UoN, Kenyatta University(KU), Nairobi, Kenya, 1st -5th December, 2014
5. Thagana, W.M., Targeted Plant Breeding, KARI-Thika/Kenya, 1/11/13
6. Thagana, W.M., Enhancing Cassava Productivity Through Host plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease using Genetic Engineering and Marker Assisted Selection-a Kenyan project, Arusha/Tanzania, 28/1/13 -1/02/13
7. Thagana, W.M., Enhancing Cassava Productivity Through Host plant Resistance Breeding Against Cassava Mosaic Disease and Cassava Brown Streak Disease using Genetic Engineering and Marker Assisted Selection-a Kenyan project. Arusha/Tanzania. 28/1/13 -1/02/13
8. Thagana, W.M., Occurrence of seed abortion and numerical components of seed yield of soyabean (*Glycine max* L. Merr.) in three contrasting environments. El Minia/Egypt, 25th-29th March, 2012
9. Thagana W.M., Commercialization and Utilization of Jojoba (*Simmondsia chinensis* [Link] Schneider) as a basis for Industrialization and Income Generation in ASALs, UniBRAIN/PanAAC Fair, Hilton Hotel, Nairobi, 26th-27th Nov, 2010
10. Thagana, W.M., Chickpea - a promising new food legume crop for drought prone cool areas of Kenya. Cape Town/South Africa 2009
11. Thagana, W.M., Comparison of phenotypic characters of mutant lines of rapeseed (*Brassica napus* L) with the original parents. Nairobi/Kenya, 2008
12. Thagana, W.M., *In vitro* embryo culture and immature seed germination techniques for rapid generation advance in soyabean [*Glycine max* (L.) Merrill], Nairobi/Kenya, 2006
13. Thagana, W.M., Variability in M2 generations and characteristics of selected advanced mutant lines of rapeseed. 2006
14. Thagana, W.M., Characterization and genetic relationships of rapeseed (*Brassica napus* L.), Entebbe/Uganda, 2005
15. Thagana, W.M., Introduction and status of Jojoba *Simmondsia chinensis* (Link) Schneider production in Kenya. Nairobi/Kenya, 2004.

16. Thagana, W.M., Genotype-environment interactions and stability estimates for sunflower (*Helianthus annuus* L.) varieties grown in diverse environments in Kenya. Johannesburg/ South Africa. 2002.
17. Thagana, W.M., Holistic approach in the dissemination of technologies in Lare division, Nakuru district, Egerton university/Kenya. 2001
18. Thagana, W.M., The status of Kenya in the Global production and supply of oilseed and oilseed products. Nairobi/Kenya. 2000.

1.6 Supervision of Postgraduate Students

1.6.1 Masters

1. **Kirui Kipngetch Rickson.** MSc Thesis-Evaluation of Chickpea (*Cicer arietinum* Genotypes for Fusarium Wilt Resistance and Its' Management by Fungicides. **Graduated-8th December, 2017, Egerton University.**
2. **Onyango Rosally Anyango (2014).** MSc Thesis- Characterization of Virus-free Sweet Potato (*Ipomea batatas* [L.] Lam) Landraces Using Morphological and SSR Markers in East Kamagak Location-Rachuonyo District. **Graduated 4th July 2014, Kenyatta University.**
3. **Jobson Aruna Momo 2014.** MSc Thesis-Effect of Withholding Irrigation Water at Different Levels After Complete Heading on Rice Yield and Seed Quality. **Graduated 4th July 2014, Kenyatta University.**
4. **James M. Gimase 2015.** MSc Thesis-Genetic Diversity of Arabusta Coffee (*Coffea arabica* L. x *Coffea canephora* Pierre) and their Parental Genotypes. **Graduated 4th July 2014, Kenya University.**
5. **Anyang Robert Tabot 2015.** MSc Thesis-Effects of Varietal Differences, Plant Spacing, and Yields of Upland Rice in Uganda. **Graduated 19th July, 2015, Kenya University.**
6. **Wanyama Patrick Wanjala 2018.** MSc Thesis-Path and Stability Analyses of Yield and Yield Components of Soyabean (*Glycine max.* L Merr.) Varieties Intercropped with Maize. **Graduated December, 2018, Kenya University.**
7. **Tabitha Kariithi 2018.** MSc-Effect of Organic and Inorganic Fertilizers on Yield and Quality of *Amaranthus* Species in Kiambu County. **Graduated 3rd August 2018, Kenyatta University .**
8. **Janet Mwendu Nzamu 2018.** MSc Thesis-Assessment of Pollen Viability and Haploid Induction Capacity of 12 Maize (*Zea mays* L.) Inducer Lines in Makueni County, Kenya. **Graduated in December, 2018, (CIMMYT-sponsored), Kenyatta University.**
9. **Felista Wanjiku Ndungu 2017.** MSc Research- Line by Tester Analysis of Maize Inbred Lines for Northern Leaf Blight and Other Yield Related Traits. **(Submitted Thesis for Examination), Kenyatta University.**

10. **Nyaga M. Christine 2018.** MSc Research-Prediction of Hybrid Performance and Characterization of QTL Alleles Associated with Resistance to Maize Lethal Necrosis (MLN) in CIMMYT Maize (*Zea mays*) Lines. (CIMMYT-sponsored), **Kenyatta University.**
11. **Mary Wakaria.** MSc Research-Evaluation of Rice Germplasm for Resistance to Rice Blast (*Magnaporthe oryzae*) in Mwea, Kirinyaga County –Kenya. **Submitted "Intent to Submit Thesis", Kenyatta University.**
12. **Ochieng Alfred Odhiambo.** MSc Research-Cytoplasmic Genes and Their Influence in the Productivity of Dry bean (*Phaseolous vulgaris*). Second year, **Kenya University.**
13. **Bii Erick Kipyegon.** MSc-Efficacy of Local Foliar Feed Formulation Compared with Commercial Foliar Feed in Tea Leaf Productivity in Kericho County, Kenya. Second year, **Kenyatta University.**
14. **Onyango Kevin Omondi.** MSc Research- Selection and Inheritance for Tolerance to Ascochyta Blight in Chickpea (*Cicer Arietinum* L.) in Residual Moisture in Kirinyaga County, Kenya. First year, **Kenyatta University.**
15. **Justus Otieno Ojwang.** MSc Research-Characterization of Pumpkin using Morphological and SSR Markers in Kasipul Division, Homabay County, Kenya. First year, **Kenyatta University**
16. Gatheru Peter Karanja 2019. MSc research- Occurrence, Distribution and Management of Burrowing Nematodes (*Radopholus similis*) on Bananas in Kirinyaga County, Kenya. First Year, Kenyatta University.

1.6.2 Ph. D

1. **Inoti, Shadrack Kinyua (2016).** PhD Thesis- Characterization, Propagation and Management of Jojoba (*Simmondsia chinensis*) in Semi-arid Areas of Voi, Kenya. **Graduated 25th November, 2016,-Sokoine University of Agriculture, Tanzania.**
2. **Sylvia A. Henga (2019).** PhD Thesis-Finger Printing and Relating Juvenile Characters of Rice to Yield and its Components. (NACOSTI Grant)- **Kenyatta University. Graduated 27th July, 2019.**
3. **Wakhanu John Akello.** PhD Research-Nutrition-sensitive Intervention with African Leafy Vegetables to Improve Nutrition Status of School Going-Children in Kenya. -(Vice-chancellor's Grant-sponsored)-**Submitted Thesis for Examination-Kenyatta University.**
4. **Onyango Rosally Anyango.** PhD Research-Development of Net Blotch Resistant Doubled Haploid Genotypes of Barley by Chromosome Elimination using Bulbosum Technique. -(NRF Grant)-**Kenyatta University.**
5. **James Mwita Gimase.** PhD-Pyramiding of Genes for Conferring Resistance to Coffee Berry Disease (*Colletotricum kahawae*) in *Coffea arabica* L. Using Marker Assisted Selection. (NRF Grant)-**Submitted "Intent to Submit Thesis"-Kenya University.**

1.7 Professional/Consultancy (Editor/Peer review in journals, Networks/Collaborations, External Examiner, Patents)

Editor/Peer review of journals

1. **2015**- Finalization of Seed and Plant Varieties Act (CAP326) Regulations.
2. **2014**- Reviewer, AGRA/KU/UON/HAK International Conference.
3. **2014**- Reviewer, Journal of Applied Biosciences (JABs).
4. **2013**- Review of Seed and Plant Varieties Act (CAP326) Regulations.
5. **2010**- Reviewer of Papers-Journal of Animal and Plant Sciences.
6. **2008**- Reviewer of Papers-10th KARI Conference.

External Examination

1. **2017-to date**: External Examiner, Department of Animal Health and Production Mount, Kenya University.
2. **2019**- External Examiner, PhD Thesis, Jomo Kenyatta University of Agriculture and Technology.
3. **2019**- External Examiner, MSc Thesis, Jomo Kenyatta University of Agriculture and Technology.
4. **2017**- External Examiner, MSc Thesis, Jomo Kenyatta University of Agriculture and Technology.
5. **2016**- External Examiner, PhD Thesis, Jomo Kenyatta University of Agriculture and Technology.
6. **2016**- External Examiner, MSc Thesis, Egerton University.
7. **2015**- External Examiner, MSc Thesis, University of Nairobi.
8. **2015**- External Examiner, MSc Thesis, Jomo Kenyatta University of Agriculture and Technology.

1.8 Community Service and Other Engagements

1. **Elected member of County Kitui Ndeengu KGGPF** with a mandate on Green grams.
2. **Member of Board of Management** Nyumbani Village Schools, **Kitui** (A Registered Charity in Kenya, USA, UK, Italy, Ireland and Spain).

1.9 Affiliation of Professional Bodies

1. **Chairman**, Kenya Association of Food Safety and Protection (**KAFSAP**)-9/4/2019 **to date**.
2. **Chairman**, Plant Breeders' Association of Kenya (**PBAK**), 2009-2017.

2.0 National and International awards and Recognitions

1. **2008**: Awarded US\$ 400 for the **Best Paper** in Horticulture and Industrial Crops by the Secretariat of the 11th KARI Scientific conference..
2. **2006**: Awarded US\$ 145 for the **Best Paper** in Biotechnology by the Secretariat of the 10th KARI Scientific conference.

2.1 Administrative Positions Held

2.1.1 Recognized university administrative positions

1. **Director, Kitui Campus, Kenyatta University**-25th February **to date**.
2. **Member of the Local Organizing Committee (LOC), International Food Safety Conference**, Kenyatta University, Nairobi 20th -24th May, 2019.
3. **Chairman, Agricultural Science and Technology**-10th August, 2017-1st October, 2018.

4. **Member School Board of Postgraduate Studies**, School of Agriculture and Enterprise Development (SAED)-26th October, 2015-**2017**
5. **Departmental Post Graduate Co-ordinator**-8th November, 2015-**2017**
6. **Departmental Digital and E-learning Co-ordinator**-1st October, **2015 to** February, 2016
7. **Departmental Examination Coordinator**, Agricultural Science and Technology (AST)-30th June, 2011 to 30th October 2013.
8. **Member of the Project Steering Committee (PSC)**-JICA supported Science and Technology Research Partnership for Sustainable Development (SATREPS) -Rice project-1st July 2013-2018.

2.1.2 Other administrative positions Held

1. **Chairman, Kenya Association of Food Safety and Protection (KAFSAP)**-9/4/2019 to date
2. **External Examiner, Department of Animal Health Production, Mount Kenya University**-12th October, 2017-**To date**
3. **Chairman, Plant Breeders' Association of Kenya (PBAK)**, 2009-**2017**.