

PLEASE FIND THE CV OF

**MAGALHAES MIGUEL**

BELOW

**Curriculum vitae**

1. **Family name: MIGUEL**
2. **First names: MAGALHAES AMADE**
3. **Nationality: MOZAMBICAN**
4. **Country of Residence: MOZAMBIQUE**

**Contact details:**  IIAM Regional Director;

Senior Agricultural Researcher;

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Northwest Regional Center

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# Lichinga, Mozambique

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1. **Education:**

|  |  |
| --- | --- |
| **Institution**  **[ Date from - Date to ]** | **Qualification obtained:** |
| 1991-1995 | BSc IN AGRONOMY |
| 2002-2004 | MSc in PLANT PHYSIOLOGY (HORTICULTURE DEPARTMENT) |
| 2006-2012 | PhD in PLANT NUTRITIONAL PHYSIOLOGY |

1. **Language skills:** (1 - excellent; 5 - basic)

|  |  |  |  |
| --- | --- | --- | --- |
| **Language** | **Reading** | **Speaking** | **Writing** |
| ENGLISH | EXCELLENT | EXCELLENT | EXCELLENT |
| PORTUGUESE | EXCELLENT | EXCELLENT | EXCELLENT |
| SPANISH | GOOD | GOOD | FAIR |
| RUSSIAN | GOOD | GOOD | GOOD |

1. **Membership** **of professional bodies:**

|  |
| --- |
| Member of IIAM’s Scientific Council 2012- present  American Society of Plant Biologists, 2003.  American Society of Agronomy, 2002  National Farming System team, IIAM, 1997-2001 |

1. **Specialisation** (e.g. Agronomy, soil fertility, agricultural economics, veterinary science etc.)

Plant nutritional physiology and soil fertility

1. **Present position:**

IIAM Regional Director;

Senior Agricultural Researcher;

1. **Key Skills:**

Agricultural research for plant adaptation to drought and low soil fertility

Agricultural research management

Protocol development and implementation

Research project design, implementation assessment

1. **Specific experience:**

|  |  |
| --- | --- |
| **Country** | **Date from - Date to** |
| MOZAMBIQUE | Ag. Researcher 1997-present |
| USA | Visiting scholar, 2012-2013; 2015-2017 |
| COSTA RICA | Visiting scholar, 2003-2004 |
| CIAT-COLOMBIA | Visiting scholar, 2006 |
| SOUTH AFRICA | Visiting researcher 2010 |

1. **Professional experience (Formal employment and Assignments/consultancies**)

| **Date from - to** | **Location** | **Organisation** | **Position** | **Description of Duties and achievements** |
| --- | --- | --- | --- | --- |
| 2006-2017 | Moz | McKnight Foundation | Lead PI | This was a multidisciplinary project involving the following areas of research: physiology component for identification of plant traits associated to P-uptake efficiency and drought tolerance; breeding component, for incorporation of desirable plant traits into farmers preferred seed types of common bean varieties; agro-ecology component in order to assess the agro-ecological impact and climate resilience of these P-efficient genotypes; and finally socioeconomics component in order understand adoption dynamics of the new agricultural technologies. The project was implemented by three countries, namely, Honduras, China, USA and Mozambique. |
| 2014-2018 | Moz | USAID’s FtF | Country PI | Development, release of 3 new nutrient-efficient varieties of Common bean (Phaseolus vulgaris L.), and made available to famers in Mozambique and Malawi, increasing yields from 700 kg/ha to 2500 kg/ha without additional fertilizer application in farmers fields. |
| 2010-2012 | Mozambique and Kenya | AGRA | Project manager and PI | This project helped to increase crop productivity of maize from 900 kg to 1,500 kg/ha and for legume productivity from 700kg to 2,000 kg/ha, with the average fertilizer use from 4.5 kg/ha to 7 kg/ha among the farmers in the country. |
| 2006-2010 | Mozambique, Austria | IAEA | Chief Scientific Investigator | This project developed protocols that enabled the use of atomic techniques for peaceful purposes, specifically, the development of crop varieties with nutrient uptake efficiency, by using 32P isotope as mean to discriminate the total P present in plant tissue. |
| 2013-2018 | Mozambique, Malawi and Zambia | APPSA | Co-PI | This project was implemented in three countries, which helped to improve the access of high quality seeds of improved legume varieties, by strengthening seed delivery systems and seed quality control and certification of improved legume varieties. In Mozambique, around 10,000 farmers were reached and more than 50 MT of seeds of improved varieties were produced and made available to farmers that in turn helped to increase their yields by 25 to 100%. |

1. Publications

**Miguel, M. A.,** N. Nurgasenov (1996). Development and selection of early maturing Maize *(Zea Mays L.)* genotypes for northern Kazakhstan. (BS thesis work).

**Miguel, M.A.,** J.A. Mutaliano (1998). The effect of different levels of fertilizer application in Maize *(Zea Mays L.)* Yields in Manica Province. INIA Annual Report, 1998.

**Miguel, M.A.** (2004). Genotypic variation of root hairs and phosphorus efficiency in Common bean *(Phaseolus vulgaris L.)* – Pennsylvania State University. (MS thesis research work).

**Miguel, M.A.,** K. Brown, M. Blair and J. Lynch (2009). QTL Mapping of Basal Root Whorl Number in Common Bean *(Phaseolus vulgaris L).* Poster to be presented at A-C-S Abstract #55496 - 2009 Annual Meeting (November 1-5, 2009). Pittsburgh, PA, USA.

**Miguel, M.A.,** R. Vieira, K. Brown and J. Lynch (2013). Basal Root Whorl Number:  
a modulator of phosphorus acquisition in Common bean *(Phaseolus vulgaris L.)* Annals of Botany - doi:10.1093/aob/mct164, available online at [www.aob.oxfordjournals.org](http://www.aob.oxfordjournals.org).

**Miguel, M.A.,** J. Postma, and J. Lynch (2015). Phene synergism between root hair length and basal root growth angle for phosphorus acquisition in common bean. Plant Physiol. Vol. 167, 2015*.*

Chichongue O. J., Karuku G. N., Mwala A. K., Onyango C. M. and **Miguel, MA.** (2015). Farmers’ risk perceptions and adaptation to climate change in Lichinga and Sussundenga, Mozambique. African Journal of Agricultural Research. Vol. 10(17), pp. 1938-1942. DOI: 10.5897/AJAR2013.7360.

Mwakiwa E, Homann-Kee Tui S, Gungulo AL, Rainde J, Sambule N, **Miguel M**, Majone LR. (2016). Exploring the Economic Potential of Common Beans: A Case Study of Smallholder Farming Systems in Manica Province, Central Mozambique. Research Report. Patancheru 502 324. Telangana, India: International Crops Research Institute for the Semi-Arid Tropics. 28 pp.

Christopher Strock, Jim Burridge, Anica Massas, James Beaver, Stephen Beebe, Samuel Camilo, Deidre Fourie, Celestina Jochua, **Magalhaes Miguel,** Phil Miklas, Eninka Mndolwa, Susan Nchimbi-Msolla, Jose Polania, Timothy Porch, Juan Carlos Rosas, Jennifer Trapp, Jonathan Lynch (2019). Seedling Root Architecture and its Relationship With Seed Yield Across Diverse Environments in Phaseolus vulgaris – Field Crops Research Journal. <https://doi.org/10.1016/j.fcr.2019.04.012>

Burridge J., Findeis J., Jochua C., **Miguel M.,**Mubichi-Kut F., Quinhentos M., Xerinda, S., and Lynch, J. (2019). A case study on the efficacy of root phenotypic selection for edaphic stress tolerance in low-input agriculture: Common bean breeding in Mozambique, Field Crops Research Journal, Vol. 244 p. 1-11. <https://doi.org/10.1016/j.fcr.2019.107612>.

Oladzad, Atena; Porch, Timothy; Rosas, Juan Carlos; Moghaddam, Samira Mafi Beaver, James; Beebe, Steve E.; Burridge, Jimmy ; Jochua, Celestina Nhagupana; **Miguel, Magalhaes Amade**; Miklas, Phillip N.; Ratz, Bodo; White, Jeffery W.; Lynch, Jonathan & McClean, Phillip E. (2019). Single and Multi-trait GWAS Identify Genetic Factors Associated with Production Traits in Common Bean Under Abiotic Stress Environments. G3: Genes, Genomes, Genetics, 9(6): 1881-1892. <https://doi.org/10.1534/g3.119.400072>.

1. **Professional Referees**

**Maria Isabel Andrade, PhD**

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