**BIO-DATA**



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**EDUCATIONAL QUALIFICATION**

* **Ph.D. Food Technology** from Dr.Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan 173230 Himachal Pradesh India 2022
* **M.Sc. Food Science** from Sokoine University of Agriculture, Morogoro, Tanzania 2013.
* **B.Sc. Food Science and Technology** from Sokoine University of Agriculture, Morogoro, Tanzania 2005.

**RESEARCH AND TRAINING**

* **Doctoral Research Associate** (2019-2022) with Dr. Anju K. Dhiman, Professor and Dean College of Horticulture, Dr. Yashwant Singh Parmar University of Horticulture and Forestry, Nauni, Solan 173230 Himachal Pradesh India.
* **Project: “Low cost complementary food formulations to combat malnutrition in infants and children**”.
* **Masters Research Associate** (2010- 2013) With Dr. Abdulsudi-Issa Zacharia, Sokoine University of Agriculture, Department of Food Technology, Nutrition and Consumer Sciences. Morogoro, Tanzania.
* **Project: “Effect of processing methods on *β–*Carotene content and sensory attributes of orange-fleshed Sweet potato products in Lake Zone Tanzania”**
* **Bachelor of Science in Food Science and Technology** (2002-2005) with Dr. N.B Shayo, Sokoine University of Agriculture, Department of Food Technology, Nutrition and Consumer Sciences. Morogoro, Tanzania.
* **Project: “The contribution of indigenous vegetables to household food security”.**

**SHORT COURSES**

* Emerging Technologies in Post-harvest Handling and Logistics of Fruits and Vegetables for Developing Countries sponsored by The Ministry of Commerce (MOFCOM) and organized by South China Agricultural University from 4th to 24th November 2022, with certificate No. 22A1473012.
* Value Addition and Product Diversification of Coconut and Cocoa organized by Central Plantation Crops Research Institute (CPCRI), Kasaragod-India from 1st March to 15th March, 2018.
* Engendering Agricultural Research for Development Course at Morogoro from 27th -31st March, 2018.
* Communication for Behaviour Change at TCDC- ARUSHA from 15th - 19th October 2012.
* Farming System Approach Phase I and II at Umoja Lutheran Hostel Moshi from 24th - 12th December, 2008 and 16th - 26th November 2009, respectively.
* Client Oriented Research and Development Management Approach (CORDEMA) at ARI-UKIRIGURU from 8th -14th June, 2009.
* Grant Winning Research Proposal Training at VETA –DODOMA from 20th - 27th April, 2009.

**EXPERIENCES**

* Fifteen years’ experience of research in the Lake Zone of Tanzania which includes the regions of Mwanza, Shinyanga, Simiyu, Mara, Kagera, Kigoma, Geita and Tabora.
* Development and transfer of developed technologies to the beneficiaries including farmers, school teachers and students, agro-processors, health centers, enterprenurees and other stakeholders.
* Post-harvest handling of all food crops grown in Lake Zone such as cassava, orange-fleshed sweet potatoes (OFSP), maize, wheat, pulses, pearl millet, sorghum, finger millet, rice, bananas, oil seeds (soybean, groundnuts, sunflower and sesame), fruits (temperate, tropical and sub-tropical) and vegetables (temperate, tropical and sub-tropical).
* Value addition for all food crops, fruits and vegetables for the development of various food products such as bakery products, ready-to-cook food mixes e.g. instant porridge mix, weaning mixes for infants and children, ready-to-serve (RTS) beverages, such as jam, chutney, fruits syrup, candy, Osmo-dehydration of fruits like papaya, bananas, pineapples and mangoes, dehydration technology of fruits and vegetables, fermentation of vegetables such as cabbage (sauerkraut), cucumber, carrots, fruits to wine such as bananas and pineapple.
* Quality evaluation of developed food products for different nutritional characteristics
* Identifies the preferred or most efficient methods of cooking specific foods to optimize and preserve vitamins, nutrients and physical characteristics (heat sensitive nutrients) fruits and vegetables/roots (OFSP).
* Development of new products from existing ones
* Formulation and standardization of recipes for different food products to meet customers demand
* Ensures sanitation, quality, safety, and waste management standards are met within food processing areas.
* Coordination and collaboration with researchers in carrying out approved research projects

**PUBLICATIONS**

# **Chuwa C**, Dhiman A.K , Saidia P and Issa-Zacharia, A. 2023.Physico-chemical Characteristics and the Effects of Processing Methods on the Nutritional and Anti-nutritional Quality of Soybean (*Glycine max* (L.) Merrill). *Asian Food Science Journal*; 22 (10):60-69.

# Chuwa C\*, Ngendello T, Saidia P and DP Mlay 2023. Edible grasshoppers (*Ruspolia differens*) As alternative source of protein from insects to combat malnutrition. *African Journal of Food, Agriculture, Nutrition and Development*. 2023; 23(6): 23576-23589. <http://dx.doi.org/10.18697/ajfand.121.23680>

# Rani J, Kaur P and Chuwa C. (2023). Nutritional benefits of herbs and spices to human beings. Ann. Phytomed., 12(1):1-11. <http://dx.doi.org/10.54085/ap.2023.12.1.88>.

# Sadia P, Chuwa C\* and Margareth DV. 2023. Assessment of dietary diversity among smallholder farmers in contribution to household food, nutrition and income security at Misungwi district in Mwanza region, Lake Zone of Tanzania. *The Pharma Innovation Journal* 12(4): 14-20 https://www.thepharmajournal.com/

# Chuwa C \*, Saidia P and Dhiman A K. 2022. Formulation, nutritional and sensory evaluation of ready-to-reconstitute instant weaning mix. *Annals of Phytomedicine* 11(2): 1-10.

# Chuwa C\*, Saidia P and Dhiman A K. 2022. Study on the effect of different treatments on the nutritional quality of cowpea (*Vigna unguiculata*) flour. *The Pharma Innovation Journal*. 11(11): 781-786.

# Chuwa C\* and Anju K Dhiman. 2022. Development and nutritional evaluation of iron-rich instant muffin mix as a complementary food for children. *Annals of Phytomedicine* 11(1):1-10. DOI: <http://dx.doi.org/10.54085/ap.2022.11.1.0>

# Chuwa\*, C, Dhiman, AK, Attri, S and Kathuria D. 2022. Nutrition and Health benefits of ripe banana fruits. Indian Farmer, 9 (05): 193-199. Available online at: *[www.indianfarmer.net](http://www.indianfarmer.net)*. ISSN: 2394-1227 (Online)

# Caresma Chuwa\* and Anju K Dhiman. 2022. Improve children’s nutrition status with low cost food. Indian Farmer, 9 (06): 239-244. Available online at: *www.indianfarmer.net*. ISSN: 2394-1227 (Online)

# Kamal, S and Chuwa\*, C. 2022. Nutritional and Health benefits of edible flowers. Agriculture Letters 3(07):43-46. ISSN: 2582-6522. Available on line at *agletters.in/archives*

# Kamal, S and Chuwa\*, C. 2022. Effect of Processing Methods on the Nutritional Quality and Utilization of Ripe Papaya (*Carica papaya* L.). *Journal of Scientific Research & Reports*. 28(1): 54-67. DOI: 10.9734/JSRR/2022/v28i130487.

#  Chuwa\*, C and Dhiman, A K. 2022. Strategies for fighting against malnutrition in children below five years. Indian Farmer, 9 (06): 229-235. Available online at: *[www.indianfarmer.net](http://www.indianfarmer.net)*. ISSN: 2394-1227 (Online)

# Chuwa\*C, Dhiman A K and Kathuria D. 2022. Effect of Processing Methods on the Nutritional Composition of Ripe Pumpkin Fruit. Current Journal of Applied Science and Technology, 41(20): 47-56. DOI: 10.9734/CJAST/2022/v41i2031748. ISSN: 2231-0843

# Chuwa\*C, Dhiman A K and Mwita M A. 2022. Prevent osteoporosis with calcium rich foods: Part 2. Indian Farmer, 9 (06): 263-266. Available online at: *www.indianfarmer.net*. ISSN: 2394-1227 (Online)

#  Chuwa\* C, Dhiman A K and Mariam A Mwita.2022. Prevent osteoporosis with calcium rich foods: Part 1. Indian Farmer Volume 9, (06): 252-254. Available online at: *[www.indianfarmer.net](http://www.indianfarmer.net)*. ISSN: 2394-1227 (Online)

# Chuwa\* C and Dhiman, A K. 2021. Development and nutritional evaluation of ready-to-cook porridge mix as a weaning food for infants. *The Pharma Innovation Journal* 10 (12): 2259-2265.

#  Chuwa\* C, Dhiman, A K and NS Thakur, N S. 2021. Study on modification of native potato starch by various techniques. *The Pharma Innovation* *Journal.* 10(2): 538-540

1. **Chuwa\* C**, Vaidya D and Rani, J. 2021. Nutrition and Health Care for Cancer Care and Prevention. *International Journal for Research in Applied Science & Engineering Technology* (IJRASET). Volume 9 Issue I Jan 2021- Available at www.ijraset.com
2. **Chuwa C\*,** Sharma B, Mwita M A, Gwandu F B, Waibe J M (2021) Low Glycaemic Index Foods: A Resolution to Ameliorate Type 2 Diabetes. *Journal of Diabetes and Treatment* 6: 1087. DOI: 10.29011/2574-7568.001087
3. **Chuwa**\* C, Dhiman A K, Thakur N S, Kathuria D, Gautam S and Sharma, B 2020. Comparative studies on extraction of starch through physical, enzymatic and alkaline method. *International Journal of Food Science and Nutrition*: ISSN: 2455-4898, Volume 5; Issue 6; 2020.
4. **Chuwa**\* C**,** Dhiman A K, Kathuria D, Mwita M A and Gautam, S.2020.Food Fibres: A Solution to Combat Non-Communicable Diseases. *Nutrition and Metabolism*: An Open Access. DOI: 10.29011/NMOA-105.100005
5. **Chuwa**\*C, Vaidya D, Kathuria, D, Gautam S, Sakshi Sharma S and Sharma, B. 2020. Ozone (O3): An Emerging Technology in the Food Industry.*Food & Nutrition Journal*, 5: 224. DOI: 10.29011/2575-7091.100124
6. Babita Sharma, Krishan Datt Sharma, **Caresma Chuwa. 2020.** Sea Food Bioactives for Health and Wellness.*International Journal of Science and Research* (IJSR),9(11) DOI: 10.21275/SR201127155219
7. **Caresma Chuwa\***, Anju K. Dhiman and Deepika Kathuria. 2020. General Overview of Malnutrition under-five children in low-income countries and solution to mitigate. *Current Journal of Applied Science and Technology*. 39(48): 466-482. DOI: 10.9734/CJAST/2020/v39i4831266
8. Massawe M H and **Caresma Joseph Chuwa CJ. 2017.** Capacity Development for Geita farmers on Orange Fleshed Sweet Potato Processing and Handling. Available online at [UTANGULIZI: (sweetpotatoknowledge.org)](http://www.sweetpotatoknowledge.org/wp-content/uploads/2017/05/Nungwe-training-May-2017.pdf)
9. Jeremiah S. C., Ndyetabula I. L., Mkamilo G. S., Haji S., Muhanna M. M., **Chuwa C.,** Kasele S., Bouwmeester H., Ijumba J. N and Legg, J. P. (2015).The Dynamics and Environmental Influence on Interactions between Cassava Brown Streak Disease and the Whitefly, *Bemisia tabaci.* vol.105(5):646-55. Doi: 10.1094/PHYTO-05-14-0146-R.

**Book chapter(s):**

1. **Caresma Chuwa** \* and Anju K. Dhiman. 2023. Ripe Papaya: Nutrition and Health Benefits. Emerging Challenges in Agriculture and Food Science Vol. 6, 1 July 2022, Page 56-64. <https://doi.org/10.9734/bpi/ecafs/v6/3235B>ISBN: 978-93-5547-711-8, eBook ISBN: 978-93-5547-
2. **Caresma Chuwa** \* and Anju K. Dhiman. 2022. Nutrition and Health Benefits of Ripe Pumpkin Fruit, Pulp and Powder. Recent Progress in Science and Technology Vol. 4, 3 February 2023, Page 123-133.<https://doi.org/10.9734/bpi/rpst/v4/9411F>.ISBN: 978-81-19039-66-1, eBook ISBN: 978-81-19039-68-5.

**PROJECTS
1. COPI: Beyond cotton Project**

 **Establishment of Biofortified crops** (yellow maize, *jesca* beans and Orange fleshed sweet potatoes) in Misungwi, Kwimba and Magu districts. 2,500 kg of OFSP roots were harvested and fed to primary schools students from Mwagingh’i, Kadashi and Maligisu from Kwimba district, Chandulu, Ihehenaja and Mwamagoli from Magu district and Nguge, Igongwa and Mbarika from Misungwi district. 7 recipes were formulated and standardized for ready to cook and ready to save products (ugali mix, bread mix, biscuits mix, protein rich instant muffin mix, porridge mix, pancake mix and OFSP jam ).150 *vitini* were prepared (50 of @crop) with production and processing (value addition) of 3 crops printed and disseminated to AMCOS smallholder farmers in 3 districts. Assessment of dietary diversity among smallholder farmers in contribution to household food, nutrition and income security at Misungwi district (publication attached). Assessment of nutritional status of smallholder farmers in Misungwi, Kwimba and Magu districts. BEYOND COTTON PROJECT (2022-2023).

**2.COPI: Sweet Potatoes Action for Security and Health in Africa (SASHA) II**

* Multiplication and dissemination of sweet potato varieties in Lake Zone of Tanzania
* OFSP (Jewel, Ejumla, Kabode, Kakamega, Kiegea) and improved local varieties (Mazao, New Dimbuka, Polista Naspoti 11 and 12 and Mataya,) were multiplied on station (screen houses) and disseminated in Lake Zone of Tanzania under Bill and Melinda Gate Foundation Funds of USD 150,0000
* Duration 5 years (2014-2017)
1. **COPI: Pre and Post-harvest rice technologies in East Africa**
* Different rice technologies were disseminated in Mara, Geita and Morogoro regions on pre and post-harvest rice technologies such as timely harvesting and threshing of paddy, winnowing, drying and milling, grading, packaging and labelling using improved technologies such as thresher, combined harvester, black tarpaulins sheets for quick drying storage (FIFO) etc under EAAPP Funds of Tshs 78,000,000
* Duration 3 years (2014-2016)
1. **PI: Multiplication and dissemination of cassava planting materials resistant to CMD/ CBSD in Bunda District**
* 5 hectares of three improved cassava varieties were planted and disseminated (Mkombozi, Belinde and Kyaka) in Bunda District under ZARDEF Fund of Tsh 10,000,000
* More than one million, five hundred thousand cutting (1,500,000) cuttings were disseminated in Bunda District
* Duration 2 year (2009-2011)
1. **PI: Multiplication and dissemination of cassava improved varieties resistant to CMD and CBSD in Misungwi District (Ukiriguru on station)**
* 1 hectare of mkombozi variety was planted and disseminated in Misungwi District under GoT Funds of Tsh 3,000,000
* More than three hundred thousand cuttings (300,000) were disseminated in Misungwi Distict
* Duration 2 years (2009-2011)

**REFEREES**

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I **Caresma Joseph Chuwa** certify that to the best of my knowledge and belief that all the information provided above is true, regarding my qualification and experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal if engaged.



 Dr. (Caresma Chuwa)

Senior Research Officer