

CONTENTS

UNDERGRADUATE RESEARCH COLLOQUIUM.....	iii
MESSAGE FROM THE COORDINATOR.....	vi
MESSAGE FROM THE DEAN	vii
MESSAGE FROM THE HEAD.....	viii
ABSTRACT OF KEYNOTE SPEECH	ix
Developing New Bio-Fertilizers: Microbial and Biotechnological Approaches	ix
CONTENTS.....	xi
TRACK: ANIMAL AND AQUATIC SCIENCE AND TECHNOLOGY (AAT).....	1
Salt Production Process and its Socio-economic and Environmental Impacts of Kinniya Saltern	2
<i>M.S. Risna¹, M.G. Mohamed Thariq², M.M.M. Najim³</i>	
Assessing Carrying Capacity and Overall Stocking Rates of Grazing Resources in Addalachchenai DS Division, Ampara District, Sri Lanka.....	3
<i>B.M.A.K.C. Madhusankha¹, M.G. Mohamed Thariq², I.L. Mohamed Zahir³</i>	
Study of Meat Quality Parameters of Broiler Chicken Under Halal and Kosher Methods	4
<i>W.K.R.T.D. Weerasekara¹, Nikzaad R.M², Muneeb M.Musthafa³</i>	
Investigation of the growth of Broiler Chicken Fed with Azolla Supplement	5
<i>R. Thusanthi¹, M.G. Mohamed Thariq²</i>	

Production of all male tilapia (*Oreochromis niloticus*) by immersing eggs in 17- α -methyltestosterone 6

R.M.I. Umayanganie¹, G. Nishanthan², P.M. Vithanage³, A.N.P. Rathnayaka⁴, M.H. Rihan⁵

Formulation of Fry to Fingerling Feed for *Catla catla* using Sea Cucumber Gut Waste as Alternative Protein Source..... 7

G.G.K.N. Indunil¹, G. Nishanthan², P.M. Vithanage³, M.H. Rihan⁴

Evaluation of Drought Tolerance in Selected Fodder Grass Species for the Dry Zone in Sri Lanka..... 8

K.N. Lakshitha¹, M.G. Mohamed Thariq²

Impact of Human – Monkey Conflict in Ampara District 9

S.W.N.M. Jayawickrama¹, R.M. Nikzaad², Muneeb M. Musthafa³

Prevalence of Gastrointestinal Parasites Infections in Goats and Sheep in Addalaichenai DS Division of Sri Lanka..... 10

P.B.C.S. Maduwanthi¹, M.G. Mohamed Thariq², M.R. Fathima Sanah³

Assessing Factors Affecting Chick Quality in Broiler Parent Stock Farms in The Western Province of Sri Lanka: A Comparison Parameter Between Nest Eggs and Floor Eggs..... 11

S.M.D.M. Muhandiram¹, R.M. Nikzaad², K.A.M. Dalpathadu³, Muneeb M. Musthafa⁴

Utilization of IoT-Based Devices for the Implementation of Smart Farming Concept in Greenhouse Environments 12

W.T.T. Isuranga¹, G. Nishanthan², R.M. Nikzaad³, M.H. Rihan⁴

Socio-Economic Status of Small and Medium-Scale Poultry Farmers in Mutur DS Division of Trincomalee 13

A.A. Sasna¹, G. Nishanthan², R.M. Nikzaad³

Effective Sex Reversal of Nile Tilapia (*Oreochromis niloticus*) using Oral Administration of 17- α -Methyltestosterone in Different Concentrations 14

N.M.I. Pathiraja¹, K.V.P.J. Madushanka², G. Nishanthan³, M.H. Rihan⁴

A Comparative Study of Feed Conversion Ratio (FCR) of Optimum Saline Tilapia (*Oreochromis spp*) Cage Culture in Batticaloa Lagoon, Sri Lanka 15

V. Suboganga¹, K. Paranthagan², S. Ravikumar³, G. Nishanthan⁴, R.M. Nikzaad⁵

Feasibility analysis for the cage culture of saline tilapia (*Oreochromis spp*) in the Southern Part of Batticaloa Lagoon, Sri Lanka 16

K. Paranthagan¹, V. Suboganga², S. Ravikumar³, G. Nishanthan⁴, R.M. Nikzaad⁵

Assessment of Poultry Farm Management Practices on Welfare Perspectives 17

A.I.C.D. Athukorala¹, R.M. Nikzaad², Muneeb M Musthafa³, D. Niwanthaka⁴

A Study on the Performance of Broiler Reared Under Different Litter Materials 18

I.M. Nishadini¹, R.M. Nikzaad², Muneeb M Musthafa³, D. Niwanthaka⁴

A Study on The Human- Wildlife Conflict in Ampara District 19

K.G. Prasadi¹, R.M. Nikzaad², Muneeb M. Musthafa³

Investigation of Ectoparasites in Goats and Sheep Farming Systems in Addalaichenai DS Division 20

K.V. H.C. De Alwis¹, M.G. Mohamed Thariq²

TRACK: CROP SCIENCE AND TECHNOLOGY (CST)..... 21

Study the Growth and Yield Performance of Lentil's (*Lens culinaris*)
Under the Sri Lankan Conditions 22

*S.N.C. Silva*¹, *A.D.N.T. Kumara*²

Evaluating Antagonistic Fungal Isolates and Natural Antifungal
Extracts as Biocontrol Agents Against the Causal Organism of
Cabbage Ring Spot Disease in The Wet Uplands of Sri Lanka..... 23

*R.M.I.K. Rathnayake*¹, *A.D.N.T. Kumara*², *C. Ranasinghe*³

Development of A Semiochemical-Based Strategy for the
Management of Coconut White Fly (*Aleurodicus cocois*)..... 24

*H.M.S.M. Herath*¹, *A.D.N.T. Kumara*²

Exploration of Leaf Photosynthetic Traits in Selected Lowland Elite
Rice Varieties..... 25

*A.K.S.K. Samad*¹, *A.N.M. Mubarak*²

DNA Profiling of Selected Inbred Maize Germplasms Using SSR
Markers Related to Canopy Architecture and Photosynthetic Traits 26

*A.F. Asmiya*¹, *A.N.M. Mubarak*²

Evaluation of Root and Shoot Morphology of Four Rice Crosses of
F₃ Generation in Lower Catena Soil Conditions..... 27

*K.L.T. Randima*¹, *M.C. Millawithanachchi*², *A.D.N.T. Kumara*³

Comparison of Growth and Yield Traits of Six Selected Rice
Varieties in Shade Net-House Conditions 28

*G.V.I.U. Vithanage*¹, *A.N.M. Mubarak*²

Identification and evaluation of semiochemicals of tea stems and
LiveWood Termite *Glyptotermes dilatatus* Bugnion and Popoff
(Isoptera: Kalotermitidae)..... 29

*H.M.A. Niluka*¹, *A.D.N.T. Kumara*², *R.D.P.D. Senanayake*³

Impact of Harvesting Dates on Seed Germination in the AT-362 Rice Variety..... 30

D.M.P.K. Gunthilaka¹, W.G.R.S. Somarathna², A.N.M. Mubarak³

Development of Management Strategy for Black Sooty Mold Fungus on Coconut Leaf After Whitefly Damage..... 31

J.D.S.J.K. Jayasinghe¹, A.D.N.T. Kumara²

Screening of 37 Rice Varieties for Submergence Tolerance Ability Under Artificial Condition..... 32

R.T. Piyumi¹, W.D.P. Weerasinghe², A.N.M. Mubarak³

Development of an Organic Liquid Plant GrowthBooster Formulation 33

D.P. D.S Pathmasiri¹, A.D.N.T. Kumara²

Assessment of Growth, Photosynthetic, and Biomass Characteristics in Selected Fodder Grass Varieties Under Varied Water Conditions 34

G.D.C. Madushanka¹, A.N.M. Mubarak²

Evaluation of Phenotype Characteristics and Ethylene Content of Selected Rice Varieties Under Two Ecological Zones in Sri Lanka 35

H.R. De Silva¹, G.D. A. Priyantha², A.D.N.T Kumara³

Evaluation on Performance of Seed Treatments Techniques in Withstand Submergence Conditions of Rice (*Oryza sativa L.*) Varieties 36

P.G.T. Dilshani¹, W.M.N.D. Gunathilaka², A.N.D.T. Kumara³, S. Madhushanka⁴

Evaluation of Root and Shoot Morphology of Four Rice Crosses of F₃ Generation in Upper Catena Soil Conditions 37

M.W.S.D. Chathurangi¹, A.D.N.T. Kumara², M.C. Millawithanachchi³

Analysis of Leaf Morphological and Anatomical Features of Selected Six Rice Varieties 38

M.F. Sahani¹, A.N.M. Mubarak²

Development of a Novel Anther Culture Protocol and Comparison of Four Commercial Potato Cultivars Under *In Vitro* Conditions 39

P. Balasubramaniam¹, P.D. Abeythilakarathna², A.N.M. Mubarak³

Impact of Inbreeding on Growth and Leaf Anatomical Traits in Selected Elite Traditional Maize (*Zea mays* L.) Accessions of Sri Lanka..... 40

M.F. Sahana¹, A.N.M. Mubarak², M.N. Nashath³

Evaluation of Suitable Local Nutrient Mixtures for Micro Propagation of Potato (*Solanum tuberosum*) 41

U.R.H. Madara¹, G.D.G. Chathurani², A.N.M. Mubarak³

Evaluation of Root and Shoots Performance of F3 Progeny Lines of Four- Rice Crosses Under Iron Toxicity Conditions 42

W.A.P. Eashani¹, M.C. Millawithanachchi², A.N.M. Mubarak³

Characterizing the Plant Volatiles in Susceptible and Resistant Rice Varieties against Rice Field Rats 43

B.M.G.R.R.K. Basnayaka¹, A.D.N.T. Kumara², S.R. Sarathchandra³

Enhancing *In-Vitro* Shoot Multiplication and Elongation in *Aglaonema unyamanee* Tricolour Using Thidiazuron 44

S.N. Kalubowila¹, A.N.M. Mubarak², J.H. Bandaraalage³

Development of a Suitable *In vitro* Protocol for *Nymphaea* Leaf Culture..... 45

M.N.F. Sahana¹, A.N.M. Mubarak², A.N. Nanayakkara³

TRACK: FOOD SCIENCE AND TECHNOLOGY (FST) 46

Study on the Use of Stabilized Rice Bran for the Formulation of Healthy Foods and Evaluation of the Nutritional and Functional Properties of Developed Products..... 47

N.T.S. Perera¹, K.V.T. Gunawardhana², U.L. Abdul Majeed³

Compatibility of Flour of Cassava, Sweet Potato, Jackfruit and Breadfruit for Partial Replacement of Wheat Flour in Dinner Bun Production 48

S.H.F. Sahla¹, U.L. Abdul Majeed², T.M.A.N Weerasinghe³

Optimization of Processing of Starfruit (*Averrhoa carambola*) Cider 49

K.D. Niluka Sandamali¹, M.B. Fathima Jemziya²

Effect of Brewing Time and Temperature on Microbial Load in Ceylon Black Tea..... 50

N.D.U.D. Amarasena¹, H.A.P.W. Hettiarachchi², K.P.G.K.T. Guruge³, S.D.T. Maduwanthi⁴

Investigation of Edible Starch – Based Coating for the Preservation of Breadfruit During Minimal Processing 51

D.G.N. Sandamali¹, M.B. Fathima Jemziya²

Development of Frozen Yoghurt Incorporating Mango (*Mangifera indica*) Var. Alphonso 52

U.A.H.N.K Gunaseela¹, H.A.P.W. Hettiarachchi², T. Sandaruwan³

Effect of Different Heat Treatments on Oxalic Acid Content, Physicochemical and Sensory Characteristics of Bottled Star Fruit (*Averrhoa carambola*) in its own Juice 53

D.M.T. Dilrukshi¹, H.A.P.W. Hettiarachchi², R.M. Nikzaad³, N. Jayathilaka⁴

Optimizing Conditions for the Production of Jackfruit Rind Candy: A Comprehensive Study 54

A.M.A.H.K Alagiyawanna¹, M.B. Fathima Jemziya², J. Chandrasena³

Evaluation of Different Edible Coatings for Their Efficacy and Reducing Chilling Injury in Mangoes..... 55

A.L.F. Matheeha¹, M.B. Fathima Jemziya²

Development of Bio Degradable Packaging Materials from Banana Peels 56

V.U.B. Kavindi¹, H.A.P.W. Hettiarachchi²

A Study on Consumer Purchasing Behaviour on Spicy Products Special Reference to Matara District 57

N.G.K. Wickramasinghe¹, M.B. Fathima Jemziya², H. Weerathunga³

Suitability of Utilizing of Used Rice Bran Oil to Produce Hard Soap and Liquid Soap 58

S.M. Bandara¹, H.A.P.W. Hettiarachchi², S. Jayawardhana³

Determination of Antioxidative Ability of Clove, Nutmeg and Cinnamon Essential Oils on the Oxidative Stability of Coconut Oil 59

K.S. Opallage¹, H.A.P.W. Hettiarachchi², A. Pushpakumara³

Study on the Variations in Characteristics of Cassava Starch During the Chemical and Physical Modification Process Within Selected Locally Grown Varieties..... 60

H.T.P. Kumara¹, H.A.P.W. Hettiarachchi², K.V.T. Gunawardhana³

Development of A Soya-Based Instant Soup Mix using Locally Available Raw Materials..... 61

M.A.L.P. Vijayawardana¹, U.L. Abdul Majeed², L.A. Upeka Buddhini³

Development of Pineapple Smoothie..... 62

N.R.H. Chathurangi¹, M.B. Fathima Jemziya², W. Sadamali³

GAP Analysis Between Current Good Manufacturing Practices and Post-corrective Action at a Dairy Processing Plant 63

W.L.M. Madhuhansi¹, M.J.M. Fari², L.B. Pettiyagoda³, R.M. Nikzaad⁴

Development of Fruit Mincemeat Based on Palmyrah Fruit Leather with the Addition of Dried Fruits..... 64

P. Dilani¹, T. Kirushanthi², M.J.M. Fari³

To Investigate the Effect of Nano Edible Coating on Shelf Life of Guava 65

T.D. Pandithasekara¹, H.A.P.W. Hettiarachchi², R.M. Nikzaad³

Creation of A Dairy-Free and Lactose-Free Beverage: Harnessing the Richness of Coconut Milk Infused with Roasted Barley..... 66

H.P.H.D. Pathirana¹, M.B. Fathima Jemziya², M. Lakmali³

Determination of Physical and Engineering Properties of Ceylon Nutmeg (*Myristica fragrance*)..... 67

A.H.A.B. Anushka¹, H.A.P.W. Hettiarachchi², R.M. Nikzaad³

The Impact of Packaging Materials on paddy (AT362) Quality Preservation and shelf-life extension: An IOT-Enabled Study..... 68

M.F. Haniya¹, M.B. Fathima Jemziya²

Development and Quality Evaluation of Plant-Based Burger Patties 69

P. Loosiya Antony¹, S.A.S. Jayawardana², M.J.M. Fari³

Analysis of The Catechin and Caffeine Content in Fresh Tea Leaves from Fifteen Distinct Tea Cultivars and The Processing of Catechin Enriched Specialty Tea 70

A. Manojani¹, K.G.N.P Piyasena², M.J.M Fari³

Development of Production Technology for Different Yam-Based Flakes and Allied Production and Evaluation of Their Physicochemical And Nutritional Properties 71

E.M.C. Madhushanka¹, M.B. Fathima Jemziya², V. Nilukshi³

Determination of the Effect of Essential Oil Extract from Clove (*Syzygium aromaticum*) Leaves and Buds on the Thermal Stability of the Coconut Oil 72

T.M.A.S. Thilini¹, M.J.M. Fari², H.A.P.W. Hettiarachchi³, T.M.M Marso⁴, R.M. Nikzaad⁵

Development of Herbal Tea Using Powdered Pumpkin Seeds (*Cucurbita maxima*) 73

H.S. Liyanage¹, M.J.M. Fari², R.M. Nikzaad³

Development of Ice Cream Added with Jackfruit (*Artocarpus heterophyllus*) and Sugarcane Syrup 74

E.B.C. Mangalika¹, M.J.M. Fari², S.H.D. Devindi³

Analysis of Total Polyphenol Content of Fresh Tea Leaves and Black Tea from Fifteen Distinct Tea Cultivars 75

M. Kannadashan¹, K.G.N.P Piyasena², M.J.M Fari³