

UNIVERSITY OF GUYANA
FACULTY OF AGRICULTURE AND FORESTRY

Research Agenda 2019 - 2024

Vision:

“The Faculty is committed to producing a cadre of professionals through `excellence in teaching, research and service to meet changing demands in Agriculture, Forestry and related sectors locally and regionally”

Mission:

“Sustainable Agriculture and Forestry through Education”

THEME: Enhancing the Delivery of Agriculture and Forestry Education in Guyana through Partnership, Harmonisation and Entrepreneurship

1. Bioenergy/Wood gasification and Biochar (Lead Researcher Dr. Lewis and Team)
 - Biochar/Bio Energy Research in the areas of Bio char as a soil amendment and potting soil
 - Bioenergy plantations for Restoration/Reforestation/Rehabilitation.
 - Forest Ecology and Silviculture research
 - GIS/RS studies
 - Agroforestry
 - Biomass estimation/ soil organic Carbon studies in reforested area
 - Sustainable byproducts- Sawdust cement blocks
2. Organic bio-pesticides to treat pests and diseases and bio-fertilizers to enhance growth and productivity of plants (Lead Researcher Prof R. Jagessar, Dr. Charles and Team)
 - Laboratory bioassay of botanicals
 - Field trials to test useful botanicals
 - Field trials to assess bio-fertilizers
 - Assessment of industrial processes for commercial production
3. Soil Fungi and Rhizobia to enhance plant growth and production (Lead researcher Prof Gomathinayagam, Ms Dillon Husbands and team)

- Identification, Collection and Screening of useful and important soil fungi and rhizobia
 - Laboratory, pot and field trials of beneficial soil fungi and bacteria- rhizobia
 - Entomopathogens to control pests and diseases (with Dr. Charles)
4. Agronomy (Leader in Agriculture Extension from a University Perspective) (Prof Khumotov and team)
- Tropical Vegetable Production (Ms Kaye, Dr Charles, Mr Bullen and Team)
 - Climate resilient agriculture
 - Shade house technology
 - Drip and sprinkler irrigation Systems
 - Soil Productivity (Fertilizers and Biochar studies)
 - Vermicomposting (with Prof Ansari)
 - Development on climate resilient cultivars (Sweet potato and Cassava)
 - Climatology
 - Agricultural policy (with Dr Jean David)
 - Fruits (Pomology)- (Mr Dharamdeo Singh, Ms Donna Morrison and team)
 - Characterization and varietal selection for particular use, environment and soil type (with Ms Kaye and Dr Charles)
 - Agro-processing and value addition through Food Science and Technology
 - Post-harvest technology through reduced loss and improved shelf-life
 - Coconut
 - Cherries
 - Mangoes
 - Golden Apples
 - Citrus
 - Sour-Sop
 - Plantain
5. Biotechnology (Embryonic Stage Equipment currently being purchased) (Lead Researchers Ms Kaye, Dr. Charles and team)

- Fungi (AMF, Trichoderma)
 - Tissue culture (Development of Planting materials that can support farmers and rural communities that are adaptable to the changing climatic and soil conditions)
 - Macro-propagation
 - DNA (Characterization and diagnostics)
 - Organogenesis (creating improved climate resilient seed materials)
6. Aqua-culture and Aquaponics (Ms. Providence, Dr R. Domer and team)
- Feed/ration formulation using local feed stuff
 - Determination of growth rate of commercial fish production
 - Water quality testing
 - Pest and disease
 - Sustainable vegetable production and stocking rates of Aquaponics containers
 - Utilization of indigenous fish species for commercial production
7. Animal Science (Lead researchers Dr. Sadik, Dr. Domer, Dr. Overton and team)
- Poultry Production (Feedstuff/ Animal Nutrition/ Alternatives for protein supplements)
 - Beef Production
 - Swine Production
 - Animal Health
 - Food Safety
 - Animal welfare
8. Institute of Food and Nutrition Security(IFANS) TBA
- A professional Centre of Excellence dedicated to eradicating food losses from Farm to Table while assisting in policy development
- Nutrition
 - Research and Development
 - Value added processing
 - Food safety

- Food Storage
- Food Analysis
- Food Transportation
- Food Regulation and Labelling
- Data repository and Data Clearing

Development of Programmes in

- Food Technology and Agro-processing
- Agri-entrepreneurship and marketing
- Biotechnology
- Policy and Extension Education
- Landscape Ecology
- Food Safety
- Operate as an independent Laboratory (clearing house) for food standards for local and international markets
- Become ISO 9001 Certified Faculty by December 2021.