

Elijah Cheruiyot

Physics, Remote Sensing

International Potato Center (CIP)

Crop Mapping

AgriGIS Workshop and Think Tank meetings, Nairobi, Kenya

Organization Background

- CIP was founded in 1971 as a root and tuber research-for-development institution delivering sustainable solutions to the pressing world problems of hunger, poverty, and the degradation of natural resources
- CIP seeks to achieve food security, increased well-being, and gender equity for poor people in the developing world
- CIP is part of the CGIAR Consortium

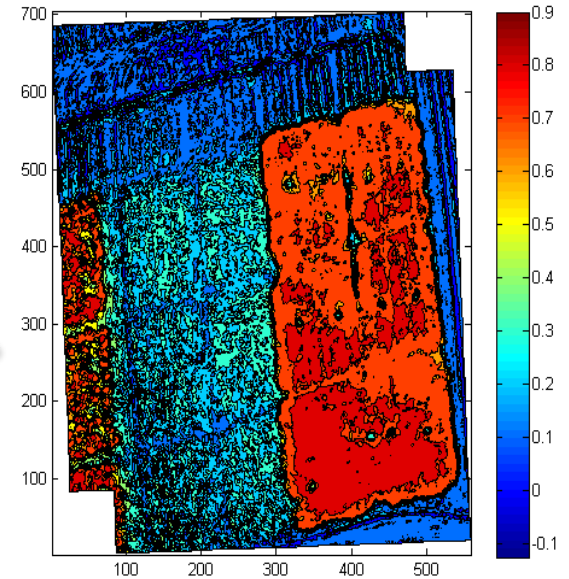
Current work/research

- Develop remote sensing and GIS technologies for monitoring smallholder cropping systems
- The research seeks to address cost/sustainability and accuracy of collecting agricultural statistics
- Involves use of high resolution unmanned aerial vehicle (UAV)-based data as well as satellite-based data
- UAV platforms, customized sensors, open-source data acquisition and processing software have been developed

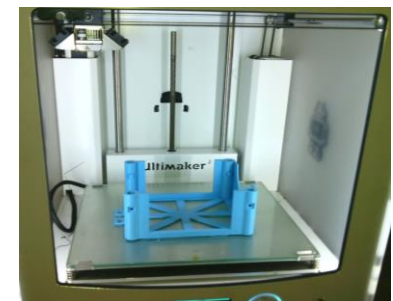
UAVs and sensors developed



CIP-Built camera mounted on a UAV

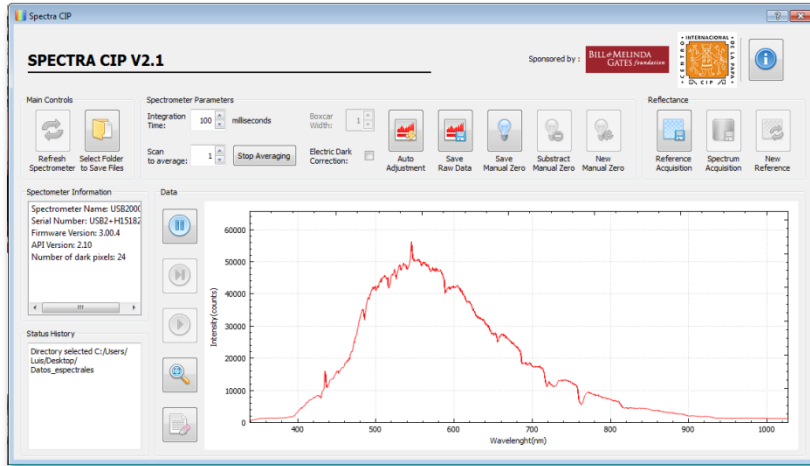


NDVI obtained with CIP Built Camera

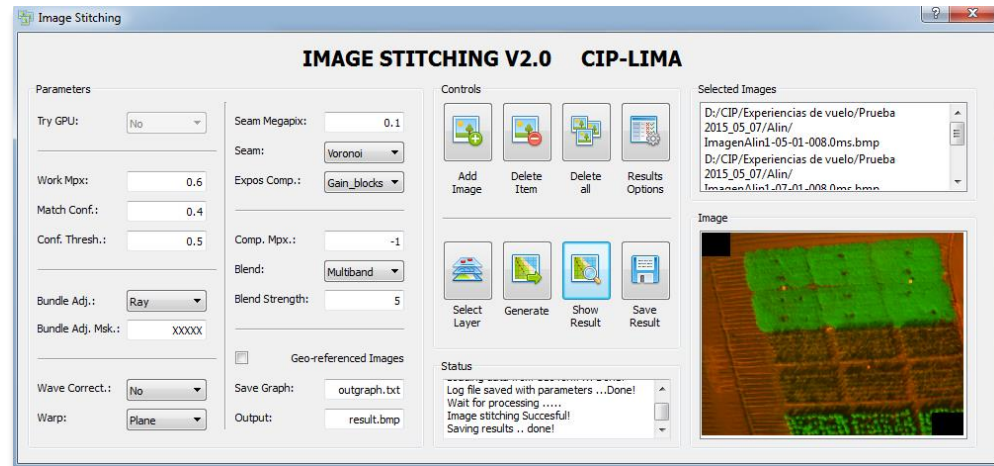


Locally assembled UAVs and other accessories made from 3D-printed parts

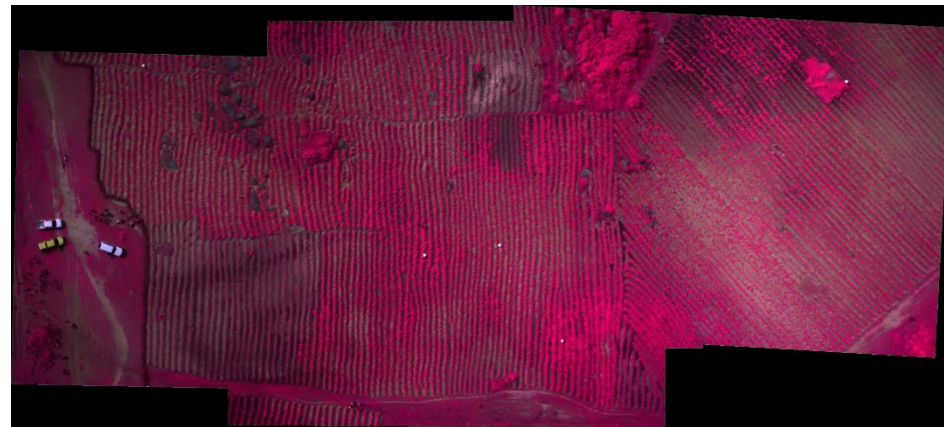
Open-source software



Spectra_CIP Software for collecting spectral measurements

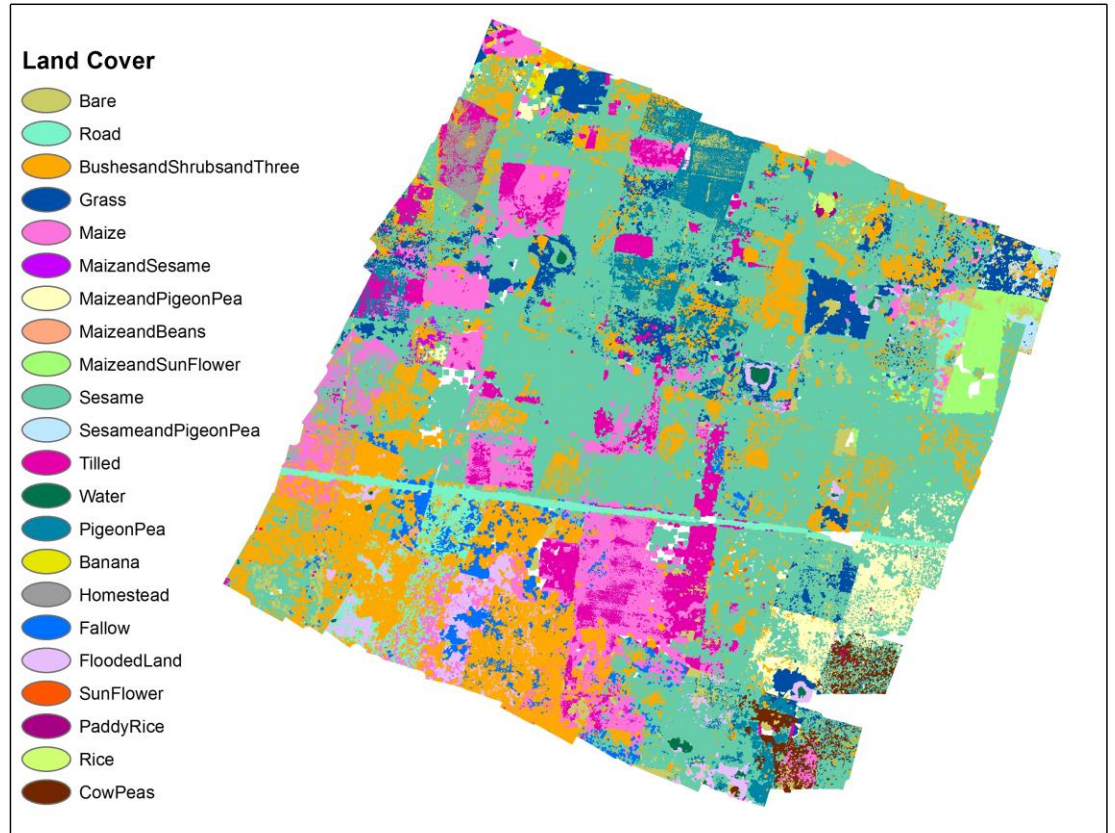
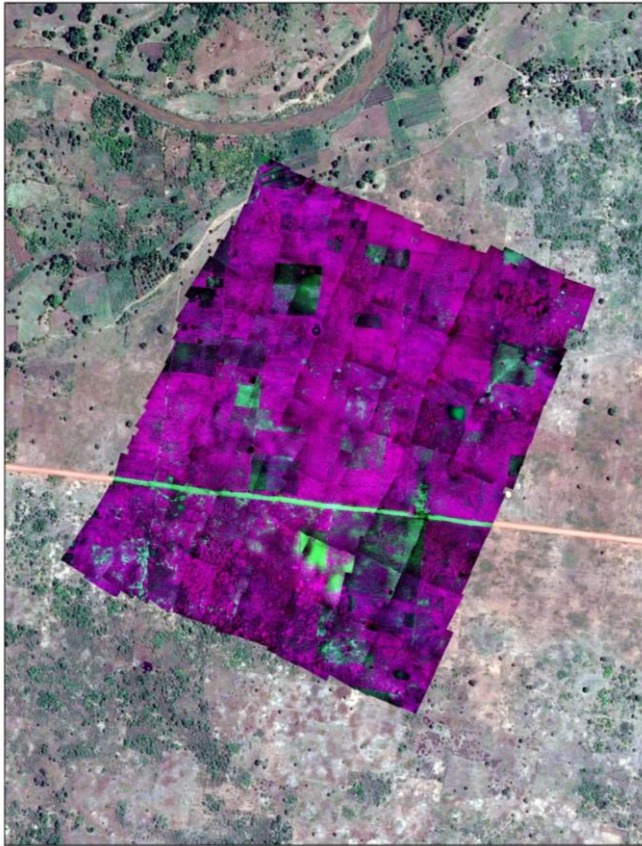


ISAM Software for seamless mosaicking of high resolution UAV data



Mosaic generated

Example: Crop statistics



Contact info.

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Learn more:

[ARSIS Video](#)



The image shows a screenshot of the UAV4Ag website. The header is dark blue with the text "Unmanned Aerial Vehicles (UAV) for Agriculture" and a search bar. Below the header, there are navigation links: "Home", "Discussions", "Library", and "Members". The main content area features a world map with several blue circular markers indicating global locations. A white drone with a camera is positioned over the map. At the bottom of the map, there is a call to action: "Join now via www.uav4ag.org". In the bottom right corner, there are logos for CTA (Centro Tecnológico de Agricultura) and the Centro Internacional de Agricultura Tropical (CIAT).

Join UAV online community [UAV4Ag](#) on DGroups