



**School field trip to enhance student Knowledge retention in Farm Power and Machinery at JKUAT, Kigali Campus: a trip report**



## Introduction

After the class course of **Introduction to farm power and machinery**, a field trip was organized for the students of the Department of Agricultural Economic and Rural Development (Year 3). This aimed at providing experiential and contextualized knowledge in order to develop a deeper understanding of the role of farm power and machinery in improving agricultural outcomes for improved rural development, especially in Rwanda.

Before proceeding to the field, students were reminded the arching role of mechanization as a catalyst for rural development in Rwanda. More clearly, modernizing and intensifying agricultural production systems is a crucial step towards ending poverty circle of the Rwanda smallholder farmers. Here, mechanization has a significant role to play, at all levels along the entire value chain.

To demonstrate to students various mechanization options that can be implemented in collaboration with the public and private sector in Rwanda, two different trips were conducted.

### (1)Field trip to Gahanga mechanized farm, Kicukiro district on 24<sup>th</sup> August 2016

A mechanized farm situated at Gahanga-Kigali was visited to explore how tractors belonging to Rwanda Agriculture Board (RAB) perform primary and secondary tillage.

Different engine implements used during primary and secondary tillage were shown with more technical explanation to students. Students were also taught how a tractor is operated to perform a given farming task such as tillage. Students were also encouraged to manipulate the tractor so as to demistify its use.



**Student Umutoni learning to operate a tractor**



**The lecturer teaching students the use of machinery and advantages in Agricultural development**

## **(2)Field trip of RAB Workshop at Kabuye and StrawTech in Free trade zone on 28-09-2016**

Rice is important cereal cultivated by smallholder farmers in Rwanda. However, rice producers have failed to sufficiently produce to satisfy the market due to several factors among which is quasi absent use of machinery yet it is an essential input to raise labor and land productivity and reduce drudgery. The Ministry of Agriculture and animal resources introduced machineries especially for rice crop to demonstrate possible mechanization of rice cultivation in Rwanda.

During field trip, students visited the workshop of Rwanda Agriculture Board (RAB) at Kabuye, where they were shown Rice trans-planters and how these machines perform their work. Students were explained how it is profitably possible to use rice trans-planters by the Rwanda rice farmers to improve the productivity and net return to their investment in machinery.

Students visited also the company STRAWTEC RWANDA, to explore the potential for mechanization along the agricultural production value chain.

Rwandan farmers often burn straw once rice and wheat have been harvested. With the introduction of machinery by STRAWTEC represents an innovative alternative use of local resources, as flooring, partitioning and prefabricated housing.



Students were shown piles of straws supplied by rice and wheat farmers and how these materials are treated to produce construction materials. This mechanization activity is expected to generate about 5000 farming jobs and USD 3.6 million every year.

Students also visited a house constructed from rice and wheat straw materials to underline how mechanization of agriculture could contribute to develop agriculture in Rwanda but will help to produce materials for the development of off-farm sectors.



Students were also shown how not only construction materials are here produced but also the refuse from straw treatment leave behind a variety of product such as compost highly needed for soil fertilization.



**Report done by**

**CYAMWESHI RUSANGANWA ATHANASE**

**Tel 0788609918**