



## Development of sustainable commercial pineapple value chain system for increased yield and income, and improved livelihood of smallholder farmers in Central Region of Ghana

### Summary

Smallholder pineapple farmers face marketing, production, post-harvest challenges and also lack clean planting materials. Meanwhile, University of Cape Coast in Ghana has the capacity to generate knowledge and advanced technologies to make pineapple farming profitable. The overall goal of this project is to evolve an action research with students, scientists, lecturers, entrepreneurs and smallholder pineapple farmers to develop a sustainable commercial pineapple value chain to increase smallholder pineapple farmers' yield, income and improve their livelihood.

The main expected outputs are identification of the problems, and issues associated with profitability and economic viability of commodities and activities along the pineapple value chain, establishment of mother gardens for mass production of planting materials, an out-grower scheme and mini processing plant for processing, packaging and marketing of pineapple. Development of curriculum and modules on profitable pineapple production along the value chain and on-farm demonstration plots to train TVETs interns.

The project employs an action research design to simultaneously assist in practical problem-solving and expand the frontiers of scientific knowledge, as well as enhancing competencies of respective actors in the pineapple value chain. Specifically, students, scientist, lecturers, entrepreneurs and smallholder pineapple farmer will use baseline survey, value chain mapping and analysis, tissue culture techniques and on-farm trials, experimentation, and out-grower scheme, demonstrations to implement the project.

The specific objectives are to:

- i. Identify the socioeconomic, production and marketing challenges of smallholder pineapple producers and assess the profitability of commodities and activities along the pineapple value chain.
- ii. Apply tissue culture for mass production of improved and disease free planting materials (sugar-loaf, MD2 and smooth cayenne varieties) for supply to smallholder farmers.
- ii. Conduct on-farm trials, experimentation, and set demonstrations with farmers to address prevalent disease and soil fertility problems in pineapple production in the study area.
- iv. Establish an out-grower scheme for adoption of improved, disease free planting materials (varieties) and good agricultural practices to produce healthy fruits for supply to pineapple processing plant.
- v. Establish a mini pack house and processing plant at University of Cape Coast for processing, packaging and marketing of pineapple juice and other products to the hospitality industries in the Central, Western and Greater Accra regions of Ghana.
- vi. Design curriculum and modules on profitable pineapple production along

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**Project ID: RU/2018/CARP+/06**

**Project duration:  
48 months**

**Start Date:  
1<sup>st</sup> March 2018**

**Total budget:  
USD 350,000**

**Project partners:  
Lead Partner: School of Agriculture, University of Cape Coast, Ghana**

**Partner 1: Aswansi Farm Institute**

**Partner 2: Smallholder pineapple farmer groups at Ankwanda, Ekumfi Owuye and Aswansi in Central Region of Ghana**

**Partner 3: Departments of Agriculture, Komenda-Edina-Eguafo- Abrem, Ekumfi, Abura/ Asebu/ Kwamankese District Assemblies, Central Region**

**Partner 4: Department of Molecular Biology and Biotechnology, University of Cape Coast, Ghana**

**Partner 5: MAG-M Limited, Ksoa, Ghana, Commercial**

## Pineapple Farm.

**Partner 6: Greenfields Farm and Ekumfi Pineapple Processing Factory, Ekumfi, Central Region**

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**Project coordination University of Cape Coast**

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the value chain based on project experience and deliver (short-term and remedial skills building, and entrepreneurship training approaches) programmes to technical and vocational training (TVETs) interns (unemployed youth, rural entrepreneurs, farmers, students with tutors) at Aswansi Farm Institute.

### Target groups

The target groups are: Smallholder pineapple farmers, students, scientists, agricultural extension agents, interns and staff of Aswansi Farm Institute, marketers, and consumers of pineapple commodity.

### Result

There are seven result areas in this action.

**Result Area 1:** An information system on the socio-economic, production and marketing challenges of smallholder pineapple producers, profitability of commodities and activities along the pineapple value chain, recommendations on disease and soil fertility problems in pineapple production is established and shared appropriately.

**Result Area 2:** Improved and disease free planting materials (sugar-loaf, MD2 and smooth cayenne varieties) supplied to smallholder farmers.

**Result Area 3:** At least 200 smallholder farmers organized into an out-grower scheme to adopt improved, disease free planting materials (varieties) and good agricultural pineapple practices to supply healthy pineapple fruits to pineapple processing.

**Result Area 4:** A mini pack house and processing plant for processing, packaging and marketing of pineapple juice and other products to the hospitality industries in the Central, Western and Greater Accra regions established at University of Cape Coast.

**Result Area 5:** Curriculum and modules on profitable pineapple production along the value chain based on project experience are developed to deliver (short-term and remedial skills building, and entrepreneurship training approaches) programmes to technical and vocational training (TVETs) interns (unemployed youth, rural entrepreneurs, farmers, students with tutors) at Aswansi Farm Institute.

**Result Area 6:** 1 PhD, 7MSc and 6 BSc. students pursuing various degrees and trained to complete their programmes on time.

**Result Area 7:** Yield, income, and livelihood of smallholder participating farmers in Central Region of Ghana are improved.

### General Activities

- Build capacities of students to conduct baseline survey, value chain mapping and analysis.
- Apply tissue culture and other techniques to propagate pineapple planting materials.
- Experiment with farmers with biochar (pineapple by-product) and compost from pineapple industry waste.

- Set-up three mother gardens in the communities for generation of planting materials and income to support development of planting of materials.
- Work with extension agents of the Department of Agriculture and smallholder farmers to promote adoption of improved pineapple planting materials, technologies and practices and evolve an out-grower scheme to supply fresh pineapple fruits to feed the processing plant.
- Examine and improve the the efficiency of various processors and document yield potential of fruit juice from various varieties of pineapple at the processing plant.
- Link up with consumers, develop and promote the fruits and other by-products from the processing plant.
- Develop curriculum and modules on profitable pineapple value chain based on project experience.
- Design an information system to disseminate information about the project.

