NAME: ADEDIJI OLUWAPAMILERIN ELIZABETH

MATRIC NO: 18/ENG02/005

COURSE TITLE: FOOD AND SECURITY

COURSE CODE: AFE 202

PROJECT WORK: VEGETABLE FARMING

The following step is how we execute my The cycle consists of five distinct stages;

(1) Identification/Selection

(2) Preparation and Analysis

(3) Appraisal

(4) Implementation/Monitoring

(5) Evaluation

1. Identification/Selection: In this situation I want to deal with vegetables because this is what everyone needs it more like for food consumption. As time goes on I'll invest in it to promote my business this is something I have been doing and the government have involved me and I am looking forward to promoting this business other countries in Africa does not really have what we have and the government have decided that I should expand my business at least to help with their economic crises I'll do this at a cheaper rate and when their economy is stable I'll increase my price we are just doing this to help them get available cheap veggies around. Therefore the president of the various countries we've decided to go to they've agreed to our plans sector objectives targets policies and price.

What we need now is suitable environments to plant crops, good soil, hopefully good weather, and availability to large open domestic markets. We hope to get all this done according to plan.

2. Preparation and analysis: Commercial vegetable production systems in the uplands of Southeast Africans are important to supplement the demand for fresh vegetables in lowland African cities. A farm survey and soil sampling was done to characterise and identify major factors limiting vegetable productivity in the uplands of the Kenyans, Ugandans. Large yield differences were found among the four most common crops: tomato (Lycopersicon esculentum), cabbage (Brassica oleracea var. capitata). The most closely correlated factors

with crop yields were: nitrogen application rates for tomato and cabbage; topsoil per cent sand and fungicide for potato. Following multivariate data analysis, two vegetable farming systems were identified: the higher external nutrient (HEN) and the lower external nutrient (LEN) systems. To enhance their sustainability, both systems should adopt more appropriate soil conservation practices, cropping sequences, and plant protection techniques. Additionally, the LEN farmers should increase nutrient application, while the HEN farmers would benefit from labor saving technologies, crop diversification, and more judicious fertiliser application.

3.Appraisal:The 4 small-scale farmer cooperatives Jabulani, Nungwane, Senzakahle, and Siyazenzela assessed in this study are all situated in uMbumbulu (KwaZulu-Natal, South Africa) within a 2 km vicinity of the Agri-Hub (29°59'27.96''S, 30°42'28.8''E). The survey interviewed 73 farmers living within the uMbumbulu vicinity. Some of these farmers were working with the uMbumbulu Agri-Hub, which focuses on providing training on all aspects of the organic farming value chain and also purchases farmers produce. The Agri-Hub then supplies vegetables under the “organically produced” and not “certified organic” label as the organization’s produce is yet to be formally certified as organic. This study worked with 33 farmers supplying the Agri-Hub and belonging to the Jabulani (12) Nungwane (3), Senzakahle (10) and Siyazenzela (8) cooperatives. The rest of the numbers (40) were made up of untrained farmers yet to supply the Agri-Hub. The questionnaires (available as supplementary online material) were prepared in IsiZulu and English which provided insight into farmers’ attitudes, behaviors, and general hygiene practices when farming. The questionnaire data were collected through face to face interviews.

Water samples from four different locations (Jabulani, Nungwane, Senzakahle and Siyazenzela) were obtained monthly using sterile 1 L Schott bottles from areas of fast flow (for river water) at a depth half that of the total in order to avoid debris and collecting exclusively surface water. In the case of tap water, 1 mL of $Na_2S_2O_3$ solution containing 18 mg of the pentahydrate was added to the sampling flask prior to autoclaving in order to neutralize the incoming free chlorine atoms usually found in the tap water. About 20 g of spinach, lettuce and compost samples were collected aseptically monthly at the four different study sites and placed into sterile Erlenmeyer flasks. Leaf samples were collected by removing not less than 20 g of produce material combined from at least three different plants. To avoid soil-based contamination, material closest to the soil surface was avoided. This sampling procedure mimicked the practice employed by farmers whereby the oldest outermost leaves exposed to soil are not harvested for consumption and for supplying the Agri-Hub. Compost from the top part of the compost heap was taken for analysis as farmers usually use this material for fertilization as stated by key informers. All samples were stored and transported on ice and analyzed in the laboratory within 2 h. Temperature and pH of water samples were measured on-site using a calibrated pH/°C meter (Hanna Instruments, HI8314, Padova, Italy). Chemical oxygen demand was determined in the laboratory using the Merck NOVA 60 system (Darmstadt, Germany) and a Merck COD test kit (25–1,500 mg/L, Merck) according to the

manufacturer’s instructions.

4.Implementation and monitoring:The monitoring of crop growth and performance during developmental stages is an important aspect of agricultural management. It enables the farmer to implement timely interventions that ensure optimal yields at the end of the season.

Stress factors often prevent crops from developing at the rate they are capable of. Examples include:

Poor water availability (e.g., due to in-season drought)

Extreme temperatures (heat)

Competition among plants for sunlight, nutrients, water or space

Nutrient deficiency (e.g., artificial fertilizer or manure)

Uncontrolled use of chemicals (toxicity)

Fungal, bacterial or viral infection

Attack from insects or other organisms, above or below the ground

Some of the above arise from shortcomings in labor investment on the plot.

5. Evaluation: The success in the vegetable production whether it is organic or not is greatly depended on a well thought out plant. Key factors that was considered carefully during the planning stage of the farming operation are: site selection, water supply and quality, crop and variety selection, and, market development. If the wrong decision was made with regard to anyone of these, the operation would have been doomed for failure. Everybody we worked with it all turned out great.