



STRATHMORE BUSINESS SCHOOL

MASTER OF SCIENCE IN AGRIBUSINESS MANAGEMENT

MMA 8107: ECONOMICS OF AGRIBUSINESS

Date: Thursday, 30th November 2023

Time: 3 Hours

Instructions: Attempt **Question One** and any **two** other questions

Question 1 (COMPULSORY) (30 Marks)

- a) Discuss the two unique characteristics of agricultural commodities and demonstrate the Cobweb theory (15 Marks)
- b) Discuss the reasons for Africa's Technological Stagnation in Agriculture (15 Marks)

Question 2 (15 marks)

Even before the current food crisis worsened, all the data suggested that a radical rethinking of food policies in Africa was overdue. During the past two decades, multilateral and bilateral donors have invested billions of dollars—together with advice on best practices and supplies of seeds and fertilizers—in agricultural development on the continent. Their objective is to increase the output of Africa's subsistence farmers and enable them to feed their families. Yet these farmers' incomes have barely risen, and many smallholders still live at or below the poverty line. Yields haven't improved either. Discuss ways the transforming Africa's Food Systems from the Demand Side should be implemented to overcome the current challenges.

Question 3 (15 Marks)

You are provided the following production data for maize and the amount of irrigation water used in the production.

Irrigation water (acre-inch)	Maize yield per acre (25kg bag)	Marginal input cost (MIC)
10	104.0	
12	116.8	3.00
14	128.6	3.00
16	138.2	3.00
18	144.8	3.00
20	149.0	3.00
22	151.8	3.00
24	153.6	3.00
26	154.2	3.00

Given prices for irrigation water at \$3.00/acre-inch and the price of 25kg bag of maize is \$2.50.

- Derive the marginal physical product of this farm **(5 marks)**
- Determining the Profit-Maximizing Irrigation Level for maize Production **(5 Marks)**
- Determine the amount of maize that maximize profit and the optimal profit **(5 Marks)**

Question 4 (15 Marks)

Discuss the economic farm problems in your country and identify potential government interventions based on sound economic theory.