DSC5211C QUANTITATIVE RISK MANAGEMENT

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Workshop 8: Agriculture Commodities

You work in a commodities trading firm. We were given the monthly prices of several agricultural commodities from 1981 to Dec 2018: barley, beef, coffee, cotton, maize, sugar and wheat. You are required to perform a risk analysis of possible investment strategies in this products.

Please feel free to use any additional data and information from the internet.

Choose *one of the commodities* and propose an infinite-horizon inventory management policy to maximize profit by trading in the spot market. Assume a discount factor of 0.995/month. Additionally, consider a holding cost of 2%/year.

Prepare a presentation addressing the following topics:
A) Formulate the problem.   (15%)
B) Estimate the parameters.   (20%)
C) Solve the model and interpret your results.   (30%)
D) What are your recommendations?   (10%)
E) How sensitive is the optimal policy to the assumptions and parameters?   (25%)