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Uva Wellassa University

Faculty of Animal Science & Export Agriculture

B.Sc in Export Agriculture

End Semester Examination – Feb/ March 2012

Year III Semester II → IV – I

Grain Product Technology & Value Addition (EAG 344-2)

Part II - Essay

Answer Three (03) questions only.

Question 01

Quality parameters associated with paddy post harvest technology are playing vital role in manufacturing of high quality rice for better consumer perception. Hence, explain how these quality parameters are important in order to produce high quality and value added rice to the dynamic market.

(20 Marks)

Question 02

Assume that you have been employed as an advisor and trouble shooter to an exporter, who export milled white raw rice to a foreign country. The frequent customer complaint that he received was, white color of raw milled rice, he supplied is declining gradually and beyond the export quality, particularly when milled raw rice obtained from the last portion of the stored paddy. The exporter usually purchased paddy and stored them in his ware house for milling purpose. The documentary evidence reveled that average moisture content and level of impurities at the point of purchasing were 16.5% and 3.5% respectively. The ware house used to store paddy was kept close for most of the time, unless there was unloading activities.

Explain the adverse consequence happening in the storage over discoloration and remedial measures will have to be taken to get rid of this problem occurring in the future.

(20 Marks)

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Question 03

I. Sensible heating at constant humidity ratio is a popular drying method widely being used in drying of agricultural commodities.
Explain how this method facilitates to enhance water holding capacity of the drying air when air is being blown through the heat exchanger.

II. A cereal food product processer uses his dryer, fabricated with a heat exchanger to dry wet paddy for safe storage. Properties of the air before blowing through the heat exchanger were, dry bulb temperature 18^0C and relative humidity 70%.

Explain water vapor holding capacity of hot air being blown through the wet product in terms of relative humidity when dry bulb temperature reaches to 30^0C.

(20 Marks)

Question 04

Emphasis impotency of followings in grain post harvest technology.

a) Moisture resorption and adsorption isotherms of hygroscopic food products like grain.
b) Impotency of the psychometric chart in grain drying process.
c) Relationship between grain drying process and humidity ratio of the drying air.
d) Method of moisture meter calibration and impotency of it.

(20 Marks)