MASTERAL THESIS ABSTRACTS

THE EFFECTS OF UNBALANCEDNESS IN AN UPLAND RICE EXPERIMENTAL DESIGN

Ma. Cecilia I. Jhocson

The usual analysis of variance, weighted squares of means, unweighted means and partial analyses are presented for analyzing unbalanced data. These methods are employed to several patterns of unbalancedness simulated from an upland rice experiment. The main objectives of this study are to illustrate the effects of unbalancedness by comparing the analyses applied for each case and to determine the effect of ignoring unbalancedness by applying the usual analysis of variance to all cases. All the methods are implemented using the Statistical Analysis System (SAS) computing package. Findings of the study confirm that unbalancedness affects the sensitivity of the F-test in the analysis of variance most particularly in cases where there are more missing observations concentrated to a few cells.

OPTIMIZATION OF NATA DE COCO MIXTURE USING RESPONSE SURFACE METHODOLOGY

Raquel Porfiria Los Baños Tuazon

Response Surface Methodology is utilized in the determination of the optimum conditions that will yield nata de coco with the desired physical properties of weight, thickness, firmness and sensory property of smoothness.

The independent factors for the study used are the mother liquor, coco milk and sugar. An orthogonally blocked central composite design was used. The two blocking effects are the sources of mother liquor.

Results show that weight is significantly influenced by coco milk and sugar; thickness by coco milk; firmness by mother liquor and coco milk; and smoothness by all three factors.

SMOOTING OF SELECTED ANTHROPOMETRIC MEASUREMENTS OF FILIPINOS

Mary Jean Trani

Linear regression, nonlinear regression, cubic polynomial and exponential model fitting are used to smoothen values of selected anthropometric measurements (i.e., weight, height, mid-upper arm circumference, waist-to-hip ratio and body mass index) for Filipinos aged 0-65 years old. Sex and regional location are found to significantly affect the anthropometric measures under study, with the exception of body mass index for which sex differences are found to be not signifcant. Tables and graphs of smoothed values and upper and lower 95% prediction intervals are presented for each sex/region group per anthropometric measure. These can be used as reference normal values for Filipinos for such anthropometric measures.