

Utilization of “Adlai” (Coix lacryma-jobi L) Flour as Wheat Flour Extender in Selected Baked Products in the Philippines

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Abstract : In many countries, wheat flour is used an essential component in production/preparation of bread and other baked products considered to have a significant role in man’s diet. Partial replacement of wheat flour with other flours (composite flour) in preparation of the said products is seen as a solution to the scarcity of wheat flour (in non-wheat producing countries), and improved nourishment. In composite flour, other flours may come from cereals, legumes, root crops, and those that are rich in starch. Many countries utilize whatever is locally available. “Adlai” or Job’s tears is a tall cereal plant that belongs to the same family of grass as wheat, rice, and corn. In some countries, it is used as an ingredient in producing many dishes and alcoholic and non-alcoholic beverages. As part of the Food Staple Self-Sufficiency Program (FSPP) of the Department of Agriculture (DA) in the Philippines, “adlai” is being promoted as alternative food source for the Filipinos. In this study, the grits coming from the seeds of “adlai” were turned into flour. The resulting flour was then used as partial replacement for wheat flour in selected baked products namely “pan de sal” (salt bread), cupcakes and cookies. The supplementation of “adlai” flour ranged 20%-45% with 20%-35% for “pan de sal”; 30%-45% for cupcakes; and 25% - 40% for cookies. The study was composed of four (4) phases. Phase I was product formulation studies. Phase II included the acceptability test/sensory evaluation of the baked products where the statistical analysis of the data gathered followed. Phase III was the computation of the theoretical protein content of the most acceptable “pan de sal”, cupcake and cookie, and lastly, in Phase IV, cost benefit was analyzed, specifically in terms of the direct material cost.

Keywords : “adlai”, composite flour, supplementation, sensory evaluation

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