Bread is a ‘‘fermented confectionery which is produced mainly from wheat flour, yeast, water, sugar, salt and other ingredients’’. The presence of functional protein called ‘‘gluten’’ has made refined wheat flour the main ingredient of bread for ages. This work tries to investigate the physical, nutritional and sensory attributes of bread produced from a composite of whole wheat, Maize and Sorghum flour.

 Composite flour has been a means of cutting down the prices of baked products. Multigrain baked goods have the potential of improving the nutritional value of bread and reducing the cost. The flour samples were produced, the functional and the rheological properties of the flour blends were determined. The bread of different formulations was produced, physical characteristics, sensory evaluation and proximate composition of the bread were determined. Optimization was done using response surface methodology.

Water absorption capacity and Oil absorption capacity of the flour samples ranged from 91.58 to 224.37% and 67.24 to 111.62%. Swelling power and solubility index of the flour samples ranged from 461.27 to 667.10% and 3.58 to 6.98%, respectively. Water binding capacity of the flour sample ranged between 83 to 266%. Pasting temperature ranged between 64.43 -77.350C. Setback viscosity for the flour samples ranged between 61.42- 84.75 RVU. Breakdown for the flour samples ranges from 0.71 -65.04 RVU. Through point for the flour sample ranged between 46.88 -85.00RVU. Result of the physical properties showed that oven spring ranged from -0.85 to 2.0cm, loaf volume ranges from 263.85 to 560.21 cm3.

Specific loaf volume (SLV) ranged from 1.26 to 2.45 cm3/g. Moisture content of the bread samples on dry weight basis ranges from 1.27- 7.78%, crude fat ranges from 2.83-6.21%, Protein content ranges between 2.67-10.71%, fibre content ranges between 3.81-11.17%, ash content ranges between 5.58-13.11% and total carbohydrate content ranges from 61.57-74.13%. Bread produced from 50M:25S:12.5W was the best in term of overall acceptability. The Response surface methodology result shows that the best combination that can give optimum result or output in term of protein, oven spring, loaf volume and overall acceptability is 20-60M: 90-100S: 18-27W.