Agricultural inputs, such as fertilizers, have increased maize production as well as other cultures, and can provide enrichment on the nutritional value and quality of foods and their derivatives. The use of nitrogen fertilizers (eg urea) is currently 30% of the amount invested in production. In order to evaluate the impact of the use of new fertilizers on the nutritional foods quality, this study aimed to assess the effect of urea polymer modified Kimberlite (KIM) and Uremax (URM), in relation to plants fertilized with unmodified urea (URE) and with plants without fertilizer, control (TST). Therefore, samples of maize (Zea mays L.), dried at 60°C/24h, were ground and evaluated for chemical composition (moisture, ash, total carotenoids, proteins and lipids) by traditional methods, and assessment of carbohydrates and energy value. The results showed average comparative values of humidity, ash, protein, carotenoids, lipids, carbohydrates and energy value, on dry basis, respectively: KIM (7.97%, 1.15%, 8.22%, 27.00 µg/g, 3.40%, 79.26%, 380.52 kcal/100g), URM (7.67%, 1.25%, 7.91%, 26.56 µg/g, 3.54%, 79.63%, 382.02 kcal/100g), URE (7.68%, 1.18%, 7.96%, 17.29 µg/g, 3.37%, 79.87%, 381.11 kcal/100g), TST (7.94%, 1.14%, 7.08%, 29.35 µg/g, 3.47%, 80.37%, 381.03 kcal/100g). No variation was observed between the samples for the levels of carbohydrates and energy value revealing, therefore, that the samples were not affected by the treatment. However, the results indicated a higher composition of proteins and carotenoids in samples from cultivars treated with modified urea, suggesting that this technology can be an alternative to the enrichment of composition of corn food.