Objective: Micronutrient deficiencies are among the top ten leading causes of death in Sub-Saharan Africa. In Suba district of Kenya, the problem is compounded by high poverty levels and a high prevalence of HIV and AIDS. This study determined the effect of corn soy fortified complementary food on serum zinc levels among primary school pupils in Suba district.

Methodology and results: An experimental study was conducted with children in two schools (Mbita and Sindo) being fed with corn soy blend for three months. Children in a third school (Ong’ayo primary) were the control and were not fed with the corn-soy blend. Blood samples at baseline were drawn from 156 school children aged 6 to 9 years from the 3 schools (Mbita 55, Sindo 52 and Ong’ayo 49) through systematic sampling while blood samples at follow up were drawn from 138 children (Mbita 49, Sindo 46 and Ong’ayo 43). Assessments of serum zinc were done before and after three months of feeding. SPSS and Nutri-survey software packages were used to analyze data into descriptive and inferential statistics. At baseline, nearly all (95.7%) of the pupils were found to be deficient, with low serum zinc (<10.7µm/l). There was a significant reduction (p=0.0421) in the number of zinc deficient cases to 70.2% after feeding for 3 months on corn soy blend with the mean serum zinc having improved from 8.4 to 10.2 µm/l (p=0.002). Although not significantly different, girls had higher serum zinc levels than boys before feeding trials while the opposite was observed after the feeding trials. Conclusion and potential application of findings: The fortified complementary food significantly improved serum zinc levels and reduced the level of absenteeism from school. Parents are therefore encouraged to introduce and ensure families consume more of corn-soy blended foods at home. It would also be valuable for schools with feeding programmes to introduce corn-soy blends or products as part of school meals. The findings can also be used by policy makers to promote production and consumption of soya beans. Authors recommend a similar study be conducted in a different area among the same age group and results compared to validate the findings of this study.