

Abstract

Developing countries, more so those in sub-Saharan Africa, are having to grapple with high prevalence of vitamin A deficiency. Food based approaches are being recommended as the sustainable interventions. In Kenya, orange-fleshed sweet potatoes are being recommended as one such food. This study was therefore designed to assess the potential of orange-fleshed sweet potato to improve vitamin A intake by children 25-60 months old in Rumuruti division of Laikipia district, Kenya. , Using a semi-structured questionnaire, a cross-sectional survey was carried out among 227 mothers with the target children. The situation of vitamin A deficiency was assessed using one biological and five of a composite of demographic and ecological indicators. The extent of production and consumption of sweet potato by households were also assessed. A 24-hour recall was used on a sub-sample of 32 mothers to determine dietary intake of vitamin A by the children. A focus group discussion was used to determine awareness about night blindness and its local term. As a sub-clinical indicator for vitamin A deficiency, night blindness was carried out on only 4.8% of the children; the rest had received vitamin A supplementation within the last six months. Data was coded, entered, recoded and analyzed using MS Excel, Vitamin A Intake Calculator, SPSS and Epi-Info. None of the few children assessed showed any night blindness. However, demographic and ecological indicators indicated that the children were at risk of vitamin A deficiency: 86% households were surviving on less than one dollar per person per day and less than 75% of the children were consuming vitamin A-rich foods for more than 3 days in a xii week. The results indicated that 68.7% of the children had inadequate dietary intake of vitamin A in the last 24 hours. Of this group, the 25-36 months old group had consumed on average 60.8% and the 37-60 months old group, 62.7% of their RDAs. The study established that 42% households were growing and consuming mainly whitefleshed sweet potato varieties but only 24.2% had consumed sweet potatoes in the last 7 days; only 3% had consumed for at least 3 days in the week. No child had consumed sweet potato in the last 24 hours. Potential for contribution of sweet potato to vitamin A intake by children was obtained through calculation, by assuming that an average child consumed 100g of orange-fleshed sweet potato once a day. With the consumption, the RDA for vitamin A would be met from consumption of sweet potato alone. The children within the age of 25-36 months old would be required to eat 27g of the potato, and those between 37-60 months old would require 35g of the sweet potato to meet their RDA for vitamin A. The study concluded that sweet potatoes are a familiar and acceptable food in Rumuruti, but their contribution to vitamin A intake is minimal. Without vitamin A capsule supplementation, up to 68% of the children are at risk of VAD. However, inclusion of orange-fleshed sweet potato in their daily diets would easily meet their vitamin A RDAs and there would be no need for the vitamin A capsule administration.