The vitamin A deficiency (VAD) is a serious public health problem in developing countries. Data are demonstrating that Brazil have high prevalence of VAD because the ordinary dietary is not adequate to provide the Recommended Dietary Allowance (RDA). According to IBGE, the RDA inadequacy prevalence of men and women in rural areas are 83.1% and 79.1% respectively. It’s a paradox that the rural populations are in VAD risk. The Brazilian biofortification program intend to breed pumpkin, cassava, maize and sweet-potato increasing their pro-vitamin A contents to reduce VAD. This work aimed analyze the contribution of pumpkin, cassava, maize and sweet-potato to %RDA and estimate the potential of vitamin A intake from Brazilian biofortified crops. Actual consumption data from IBGE’s National Consumer Expenditure Survey 2008-2009 were used. The Survey had 34,003 respondents from all Brazilian regions. These data were crossed with IBGE’s Food Composition Table to obtain the Retinol Activity Equivalent (RAE) provided by each crop. Integral substitution for biofortified crops was supposed to estimate the potential %RDA contribution. The results show that 3.35% RDA is provided by pumpkin, cassava, sweet-potato and maize and the biofortified crops have the potential to cover 8.27% RDA. The rural population will be more benefited than urban increasing from 6.19% to 16.38% RDA. However, the consumption prevalence of these crops is very low, only 5.8% of respondents have eaten cassava. This work could show that the biofortification technology has a good potential to increase vitamin A intake if VAD risk population increase the consumption.