

Despite the provision of incentives for increased production of food crops by the government of Kenya, outputs of major crops have been below domestic requirements. Findings from earlier studies reported inelastic responses of maize production to producer prices and emphasised the importance of complementary policies targeting non-price factors to raise production. However, the influence of non-price incentives on maize production was not assessed in those studies. The literature surveyed does not also provide knowledge on the production behaviour of sorghum and millet even though government policy has targeted their expansion over the years. This study investigated the response of maize, sorghum and millet production to both price and non-price incentives. The aim was to ascertain their relative importance in influencing production of the crops as well as complementarity between price and non-price incentives. The data used was obtained from published sources for the period 1972 to 2008. An autoregressive distributed lag (ARDL) model was adopted for each crop. The findings show that maize production responds positively to its output price, sorghum price, development expenditures in agriculture, maize sales to marketing boards, growth in per capita GDP, liberalisation and governance reforms. However, maize production responds negatively to fertiliser price and unfavourable weather conditions. The response of maize output to its price is lower with rising inflation and grain market liberalisation. Sorghum production responds positively to millet price, fertiliser price, agricultural wage, development expenditure in agriculture, growth in per capita GDP and shocks in maize production. But sorghum output responds negatively to maize output price, development expenditure on roads, transport and communication and inflation. The response to fertiliser price is higher with rising inflation but lower with increased development spending in agriculture. Millet production responds positively to agricultural wage, development expenditure on roads, transport and communication and governance reforms. Millet production however responds negatively to fertiliser price, lending rate, growth of per capita GDP, liberalisation and drought. The inelastic response of output to most of the incentive variables suggests that a comprehensive policy combining both price and non-price incentives is required to raise food crops production in Kenya.