This research investigates the impact of agricultural market liberalization on food security in developing countries and evaluates the supply perspective of food security. This research theme is applied on the agricultural sector in Kenya and in Zambia by studying the role policies played in the maize sub-sector. An evaluation of selected policies introduced at the beginning of the 1980s is made, as well as an assessment of whether those policies influenced maize output. A theoretical model of agricultural production is then formulated to reflect cereal production in a developing country setting. This study begins with a review of the general framework and the aims of the structural adjustment programs and proceeds to their application in the maize sub-sector in Kenya and Zambia. A literature review of the supply and demand synthesis of food security is presented with examples from various developing countries. Contrary to previous studies on food security, this study assesses two countries with divergent economic orientations. Agricultural sector response to economic and institutional policies in different settings is also evaluated. Finally, a dynamic time series econometric model is applied to assess the effects of policy on maize output. The empirical findings suggest a weak policy influence on maize output, but the precipitation and acreage variables stand out as core determinants of maize output. The policy dimension of acreage and how markets influence it is not discussed at length in this study. Due to weak land rights and tenure structures in these countries, the direct impact of policy change on land markets cannot be precisely measured. Recurring government intervention during the structural policy implementation period impeded efficient functioning of input and output markets, particularly in Zambia. Input and output prices of maize and fertilizer responded more strongly in Kenya than in Zambia, where the state often ceded to public pressure by revoking pertinent policy measures. These policy interpretations are based on the response of policy variables which are more responsive in Kenya than in Zambia. According to the obtained regression results, agricultural markets in general, and the maize sub-sector in particular, responded more positively to implemented policies in Kenya, than in Zambia, which supported a more socialist economic system. It is observed in these results that in order for policies to be effective, sector and regional dimensions need to be considered. The regional and sector dimensions were not taken into account in the formulation and implementation of structural adjustment policies in the 1980s. It can be noted that countries with vibrant economic structures and institutions fared better than those which had a firm, socially founded system.