

Role of Small Grains in Adapting to Climate Change: Zvishavane District, Zimbabwe

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Abstract

Climate change has become one of the most profound threats to smallholder agriculture in semi-arid and arid areas. Farmers in this sector are especially vulnerable to climate change due to reliance on rain-fed agriculture, limited access to capital and technology among other challenges. While several potential adaptation options exist, many barriers hinder effective adoption of these practices, hence production in marginal areas remains very low. This chapter discusses crop adaptation through the adoption of small grains in Zvishavane rural, a semi-arid area in Zimbabwe. Small grains are conducive in hot areas; their drought-tolerant nature enables them to thrive in marginal areas making them an appropriate strategy in responding to climate change. However, several production and policy challenges associated with small grain production hinder their adoption by farmers. In view of this, this chapter discusses the potential of small grains as an adaptation strategy to climate change in Zvishavane District, Zimbabwe, and addresses potential challenges and opportunities for increased adoption and future research. The review showed that farmers in Zvishavane have perceived climate change due to noticeable changes in rainfall and temperature patterns in the past years. Despite small grain production being the best strategy due to drought and high temperature tolerance, an insignificant number of Zvishavane farmers is involved in small grain production. This is due to numerous barriers such as high labor demand associated with small grain production, the challenge posed by the quelea birds, food preferences, low markets, and low extension services and government support. It is therefore necessary to encourage adoption of small grains by developing improved varieties, adoption of climate smart agricultural practices, improved technical support, and access to markets among other interventions.