

The challenges of rehabilitating denuded patches of a semi-arid environment in Kenya

Mganga, Kevin Z.; Nyangito, Moses M.; Musimba, Nashon K. R.; Nyariki, Dickson M.; Mwang'ombe, Agnes W; Ekaya, Wellington N.; Muiru, William M.; Clavel, Daniele; Francis, Judith; Kaufmann, Ralph von; Verhagen, Jan
Date: 2010

Abstract

Land degradation is a major problem in the semi-arid environments of Sub-Saharan Africa. Fighting land degradation is essential to ensure the sustainable and long-term productivity of the habited semiarid lands. In Kenya, grass reseeding technology has been used to combat land degradation. However, despite the use of locally adapted perennial grass species namely *Cenchrus ciliaris* (African foxtail grass), *Eragrostis superba* (Maasai love grass) and *Enteropogon macrostachyus* (Bush rye) failure still abound. Therefore, more land is still being degraded. The aim of this study was to determine the main factors which contribute to failures in rehabilitating denuded patches in semi-arid lands of Kenya. A questionnaire was administered to capture farmer perceptions on failures on rangeland rehabilitation using grass reseeding technology. Rainfall data was collected during the study period. Moreover, rehabilitation trials using the three grasses were done under natural rainfall. Results from this study show that climatic factors mainly low amounts of rainfall to be the main contributor to rehabilitation failures. 92% of the respondents asserted that reseeding fails because of low rainfall amounts received in the area. The study area received a total of 324 mm of rainfall which was low compared to the average annual mean of 600mm. Reseeded trial plots also failed to establish due to the low amounts of rainfall received. This showed how low rainfall is unreliable for reseeding. Other factors namely destruction by the grazing animals, pests and rodents, flush floods, poor sowing time, poor seed quality, lack of enough seed and weeds also contribute to rehabilitation failures in semi-arid lands of Kenya.