

Abstract

The common dry bean *Phaseolus vulgaris* L. is an important source of protein and minerals. However, damage by field pests and adverse environmental factors contribute to loss and poor market value of the grain quality. Most of the bean varieties in Kenya are grown in the Rift valley, Eastern and central parts of Kenya. A country wide survey in the main bean production regions was carried out in 2012/13 during the two growing seasons. Some 10 plants were randomly sampled per 100m² plots to determine different pest occurrence per plant. In addition a field evaluation study was also carried out which concentrated data collection at mid and low altitude zones of the bean production areas. A completely randomized block design of bean variety plots were established in low midlands (LM5) and upper midland (UM3) sites. The Highest pod borer pest (*Maruca vitrata* Fabricus) abundance was recorded in the lowland altitude while bean fly (*Ophiomyia spencerella* Tryon) was found in similar occurrence in all production regions. Environmental stress associated with low rainfall amounts contributed to low yield in the low altitude region while coldness during the harvest time led to poor grain quality and low grain value at the upper midland site. Grain weight was higher in the wetter midland site than the drier low midland. Grain nutritional value of oils and protein (%) was not affected by the prevailing environmental conditions. The findings are important to farmers when making choice of profitable bean variety enterprises.