

ABSTRACT

An experiment to evaluate the bio-control potential of *Leonotis nepetifolia* and *Ocimum gratissimum* plant extracts against two-spotted spider mites on French beans was conducted in the field. Five plant extract concentrations (1.5%, 3.0%, 6.0% and 12.0% w/v) were applied with water and Abamectin 0.6 ml/L as controls. Mite counts were done before and after treatment application and expressed as corrected percent efficacy. The impact of the mites on the French beans was evaluated by recording percent leaf reduction and quality and quantity by number of pods, pod length, diameter and yield. There was a dose dependent response in percent mite and leaf reduction, number of pods and yield. Treatments applied at 12% w/v indicated higher mite reduction (82.75%) for *L. nepetifolia* and 69.06% for *O. gratissimum* compared to abamectin (65.76%). The lowest percent leaf reduction of 1.71% for *L. nepetifolia* 0.39% for *O. gratissimum* and abamectin (20.46%) was also at 12% w/v. Similarly, the highest number of pod (61.00) for *L. nepetifolia*, 48.67 for *O. gratissimum* compared to 28.33 abamectin and yield (0.88 kg) for *L. nepetifolia* and 0.90 kg for *O. gratissimum* was also recorded at 12% w/v compared to 0.36 kg for abamectin. There were no significant differences in pod diameter and pod length between the extracts concentrations and abamectin. The study demonstrated the efficacy of *L. nepetifolia* and *O. gratissimum* in managing two-spotted spider mite and subsequent increase in French bean yield under field conditions.

Keywords

Leonotis nepetifolia, *Ocimum gratissimum*, *Tetranychus urticae*, French Beans