

Table 3 Density, frequency and abundance of parthenium weeds alongside road

Study sites	Density (Plants/m ²)	Frequency (%)	Abundance
Nyabikulungo	1.9	36.7	5.3
Kagenyi	4.1	73.3	5.6
Rubwera	5.8	90.0	6.4

Table 4 Density, frequency and abundance of parthenium weeds in crop land

Study sites	Density (Plants/m ²)	Frequency (%)	Abundance
Nyabikulungo	1.2	53.3	2.3
Kagenyi	2.0	63.3	3.2
Rubwera	6.4	80.0	8.0

In three surveyed villages, parthenium weed was observed along the road side, crop and grazing lands. The presence of this weed alongside road might have helped the dispersal and spread of parthenium hysterophorus weed in crop and grazing lands in Kyerwa district. Also the quick spread of parthenium weed in non-infested areas of Kyerwa district could be attributed to dispersal of seeds by winds, water movement, animal and human activities such as using the weed as groom for cleaning the environment at residential areas. The findings of present study added information of the 2010 report and 2014 about the invasion and distribution of Parthenium weed in Arusha, Tanzania [12, 17]. Furthermore, results this study provide information to community, scientists, ecologists and other stakeholders on the extent of the widespread of the invasive weed *parthenium hysterophorus* along road side, residential areas, crop and grazing lands of the country.

4. Conclusion and Recommendations

The results of the present study provide a baseline information and quantitative comparison of the invasion and spread of parthenium weed alongside roads, croplands, residential areas and grazing lands of Nyabikulungo,, Kagenyi and Rubwera villages in Kyerwa district. There is a need to develop appropriate measures to contain the further spread of this aggressive weed in non-infested areas of other villages and districts of the country.

5. Acknowledgement

The authors would like to acknowledge Vietha Vedasto and Atwib Rashid for their invaluable assistance during the data collection from the fields. This study was supported by the Rashein Agri-consultancy of Arusha in Tanzania.

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