

# Vegetative Reproduction of *Trifolium stoloniferum* Stolons

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*Trifolium stoloniferum* (Running Buffalo Clover) is a stoloniferous, perennial legume that is native to Southern Ohio, KY, WV, and IN. It is a federal endangered species. Little is known about its reproductive and growth rates both in the greenhouse as well as in its natural habitat. Plants in the greenhouse produced long stolons but it was not known if these could be used to propagate new plants. The objectives of this research was to determine *i*) if *T. stoloniferum* stolons could be clipped and grown to form a daughter plant and *ii*) to determine if stolon size affected shoot or root production. Plants were grown from germplasm from the USDA-GRIN collection. Accession 631732 of *T. stoloniferum* was selected and stolons were randomly cut from mature plants in 1, 3, and 8 node pieces. These stolon pieces were planted in soil-less media 5 cm deep in the Kottman Greenhouse and grown for two weeks in full sun with watering as needed and no added fertilizer. At the end of the study, nodes were examined for new shoot and root growth and the amounts were recorded. All three node sizes had a similar success rate of new overall growth, with 90% of nodes producing shoots or roots. The 1- and 3-node stolon pieces had 2.20 and 1.85 shoots per node respectively and 2.50 and 1.61 shoots per node respectively. The 8-node stolon pieces had the majority of their shoot and root growth on the terminal end of the stolon piece. I concluded that cutting stolon pieces from a mother plant and planting them in soil-less media was an excellent method of propagating *T. stoloniferum* and was much less destructive than digging up entire plants in the wild.