**ABSTRACT**

Kudzu (Pueraria montana var. lobata) is an invasive weed species native to eastern Asia afflicting much of the southeastern United States. Its broad leaves and vigorous growth pattern allow it to outcompete native plant species for sunlight and nutrients. Kudzu is a leguminous plant making it a potentially ideal feed component for ruminant animals. Assessing nutritive components in areas affected by kudzu could produce benefit production while functioning as a weed control method. This study assessed the nutritive quality of late season kudzu to evaluate the nutritive potential of this commonly overgrown weed. In situ degradation of late season kudzu was analyzed using four ruminally fistulated steers as individual experimental units over two repeated trials. Sampled at 1, 12, 24, 36, 48, 60, and 72h. All steers were fed ad libitum and all samples were collected during September. Analysis of this study reflected a potential use for improving the nutritional quality of kudzu in areas affected by it. Data was analyzed by a randomized complete block design (RCBD) with repeated measures showing no significant differences between steers or trial effects. Significant changes in dry matter disappearance across steers were observed at 1, 12, 24, 36, 48, 60, and 72h with variation of 50.43%, 47.76%, and 74.26%, respectively, and highest observed degradability at 72h (73.58%). Incubation times between 24 and 72h were not used in determining rate of digestion on dry matter disappearance across these times were not significantly different (P > 0.05). Rate of digestion (k) (\( k \)) was determined using linear regression to be 1.68% • h\(^{-1} \). Along with degradation fraction (D), and indigestible fraction (U) = 1 - k • t

**INTRODUCTION**

Kudzu is an invasive weed species native to Japan that has overaken large swaths of the southern United States since its introduction in the late 19th century. Kudzu was first introduced for its ornamental nature (blooming bright green), but was not widely adopted throughout the United States until the mid-20th century through federal campaigns. In the early 20th century championed for a greater presence in the southern United States, it has overtaken large spans of the southern United States since its introduction. The unique growth pattern which offers a unique advantage over native plants is its ability to grow up sunlight and other nutrients. This plant can reproduce both sexually and asexual, flowering and spreading. These factors allow kudzu to grow at a rate of 20-30 meters/year, ultimately reducing the amount of biodiversity normally seen in areas colonized by this weed (Karlten et al., 2010).

Kudzu is a leguminous plant species which offers unique growth patterns and potential to outcompete native plant species for sunlight and nutrients. Kudzu is a leguminous plant making it a potentially ideal feed component for ruminant animals. Assessing nutritive components in areas affected by kudzu could produce benefit production while functioning as a weed control method. This study assessed the nutritive quality of late season kudzu to evaluate the nutritive potential of this commonly overgrown weed.

**RESULTS**

- Significant changes in dry matter disappearance across steers were observed at 1, 12, 24, 36, 48, 60, and 72h with variation of 50.43%, 47.76%, and 74.26%, respectively, and highest observed degradability at 72h (73.58%).
- Incubation times between 24 and 72h were not used in determining rate of digestion on dry matter disappearance across these times were not significantly different (P > 0.05). Rate of digestion (k) (\( k \)) was determined using linear regression to be 1.68% • h\(^{-1} \).
- Along with degradation fraction (D), and indigestible fraction (U) = 1 - k • t

**CONCLUSION**

Results from this study should be considered an addition to the existing catalog of data outlining the nutritive value of kudzu in ruminant animals. The unique difference observed in this data set is due to the late collection period.

**REFERENCES**


