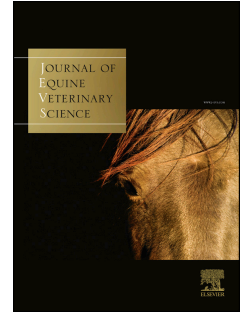


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Effects of sampling time, cultivar, and methodology on water- and ethanol-soluble carbohydrate profiles of three cool-season grasses in central Kentucky

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1 Effects of sampling time, cultivar, and methodology on water- and ethanol-soluble carbohydrate
2 profiles of three cool-season grasses in central Kentucky.

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10 **Conflicts of Interest:** None.

11 **Disclaimer:** Mention of trade names or commercial products in the article is solely for the
12 purpose of providing specific information and does not imply recommendation or endorsement
13 by the USDA.

14 **Abstract:** Cool-season grasses (CSG) accumulate variable amounts of water-soluble
15 carbohydrates (WSC, mono- and disaccharides and fructans), depending on climate, time of day
16 and year, and genotype. Fructan concentrations in CSG are sometimes estimated as the
17 difference between concentrations of WSC and ethanol-soluble carbohydrates (ESC, mono- and
18 disaccharides and variable amounts of fructan). Characterizing both WSC and ESC may improve
19 understanding of soluble carbohydrate profiles in pastures and inform grazing management
20 decisions, particularly for horses at-risk for laminitis. Three CSG cultivars from Kentucky
21 pastures were collected in the morning and afternoon on two springtime dates. WSC and ESC

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