

Metabolomic profile associated with pre-breeding puberty status in range beef heifers

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Objective: Determine differences in serum metabolites using a metabolomics approach in pubertal and non-pubertal range beef heifers in March- and May-calving herds.

Results: Metabolite data were normalized by using proportions and analyzed by partial least square discriminant analysis (PLS-DA), principal component analysis and support vector machine using the MetaboAnalyst. The PLS-DA model identified metabolites related to branched chain-amino acids metabolism, lipid metabolism, carbohydrate metabolism, and steroidogenic biosynthesis to be different in pubertal and non-pubertal heifers.





