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Highlights

- The overall composition of nasopharyngeal microbial communities of calves at feedlot entry closely resembled that of BRD affected calves, but was markedly different from healthy control calves.
- The trajectory of bovine nasopharyngeal microbial communities during the first weeks following feedlot entry could play a key role in the development of BRD in some individuals.
- The similarity between the nasopharyngeal microbiota of calves at entry and at the onset of BRD, should stimulate additional research regarding the impact of the nasal microbiota on respiratory mucosal health and BRD susceptibility during the first few weeks after arrival at a feedlot.

Abstract

Bovine respiratory disease (BRD) is one of the most serious causes of health and economic problems in the beef production industry, especially in recently weaned, intensely raised and newly transported feedlot cattle. While the importance of upper airway structure and