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Title: Effect of inoculation with *Lactobacillus buchneri* LB1819 and *Lactococcus lactis* O224 on fermentation and mycotoxin production in maize silage compacted at different densities

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Effect of inoculation with *Lactobacillus buchneri* LB1819 and *Lactococcus lactis* O224 on fermentation and mycotoxin production in maize silage compacted at different densities

Running title: Combined inoculant improves quality of maize silage

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Highlights

- Use of inoculant improved the aerobic stability of maize silage
- Minor differences in fermentative traits characterized low- or high-density silages
- Acetic acid and 1,2-propanediol were higher in inoculated silages
- The inoculant reduced the concentration of some mycotoxins in silages
- Similar mycotoxin concentrations were observed among low- or high-density silages

ABSTRACT

We examined the effectiveness of a combined inoculant of hetero-fermentative *Lactobacillus buchneri* LB1819 and homo-fermentative *Lactococcus lactis* O224 on quality of maize silage at two different densities. The four treatments were: CTR-LD, untreated at low-density (132 ± 6 kg DM/m³); CTR-HD, untreated at high density (186 ± 6 kg DM/m³); TRT-LD, inoculated at low density; and TRT-HD, inoculated

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