

SUMMARY

In this study, feces samples from particularly local cattle breeds in all around Turkey were collected. Then some anaerobic fungi which showed cellulolytic activity were isolated and the XynB gene from *Neocallimastix* sps related with the cellulolytic activity were cloned to pCT vector and pCTXB plasmid was constructed. Again, to construct a shuttle vector between *E.coli* and *Lactococcus* sps PCTXB and pIL253 plasmids, pILXB plasmid was obtained.

For transformation, *Lactococcus lactis* subsp. MG1363 ve *Streptococcus thermophilus* stains were chosen and by electroporation they were transformed with pILXB plasmid. It was determined that these transformants showed celulolytic activity by congo red method not quantitatively but qualitatively and finally lab-scale silages with different kind of hays inoculated with these lactic acid bacteria NDF and ADF analyses were done. Statistically meaningful differences between the barley hay silages inoculated with *Lactococcus lactis* and the control grup and wheat hay silages inoculated with *Streptococcus thermophilus* were found.