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Diverse microbes inhabiting livestock feed resources

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The safety of animal feed resources is of global importance in livestock sector. Knowledge of the function and diversity of microorganisms dwelling in animal feed habitats is essentially required beforehand for the safe management of feed resources. Microorganisms are not only beneficial organisms in natural feed resources but are also key players in spoilage processes changing feed quality. Depending on moisture and nutrient contents, diverse microbes are differentially inhabiting in various feed resources such as barley, soybean curd residue, brewer's grain, rice bran, spent mushroom substrates, pig feed, broiler feed, milking cow feed and corn silage etc. However, to date, microorganisms inhabiting naturally in feed resources were little reported. In this study, about 100 strains of both bacteria and fungi were isolated from various feed resources and then identified by 16S rDNA sequencing. Beneficial microorganisms include *Bacillus amyloliquefaciens, Lactobacillus plantarum, Lactococcus lactis* and *Leuconostoc citreum*, etc. Harmful microorganisms include *Burkholderia vietnamiensis, Enterococcus casseliflavus, Staphylococcus saprophyticus, Enterococcus durans* and *Pantoea agglomerans*, etc. Many other isolated strains were unclear for a safety as well as function. We will mention the strains of harmful microorganism involved in feed spoilage and pathogen by literature review. Enzyme activities related on nutrient digestion, drug resistance and antimicrobial activity were also investigated on the isolated strains.

Biography

Soo-Ki Kim has completed his PhD in Osaka University and Postdoctoral studies in Department of Biology of Purdue University. He is a Professor in Department of Animal Science and Technology of Konkuk University in South Korea. He has published research papers in the field of basic microbiology and development of animal feed additives. He has contributed as a President of Korean Agricultural Microbiology Research Association from 2013 to 2015.

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