

JOINT EVENT

20th Global Congress on Biotechnology &

3rd International Conference on Enzymology and Molecular Biology

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Influence of four kinds of additives and concentration on oats silage effect

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Statement of the Problem: The aim for this research was to study the effect of different additives and concentration on oat silage. Selected Dancer as material was used for silage in milk stage, and four kinds of additives respectively at different concentration were used. They were lactobacillus (0 mg/kg, 1 mg/kg, 5 mg/kg, 10 mg/kg), formic acid (0 ml/kg, 1 ml/kg, 5 ml/kg, 10 ml/kg), sucrose (0%, 1%, 2%, 4%) and cellulose (0 mg/kg, 50 mg/kg, 100 mg/kg, 150 mg/kg). The materials were ensiled at room temperature and opened 60 days later, and the fermentation quality and the chemical composition were analyzed. Results showed that it had a positive impact on Dancer silage with four kinds of additives. Considering nutritional value index (crude protein, ether extract and crude fiber) When cellulase were applied at 50 mg/kg, the oats silage were excellent. Considering silage quality indexes of pH value, AN/TN, soluble sugar content and lactic acid content, sucrose at 2% level was the best concentration. The best concentration of different additives were that: lactobacillus (5 mg/kg), formic acid (5ml/kg), sucrose (2%) and the influence on silage quality have no close connection with concentration when added cellulase.

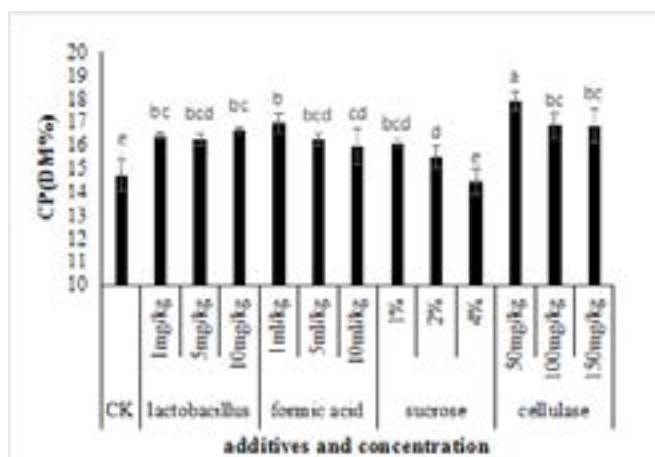


Fig. 1 Percent CP of oat as affected by four additives

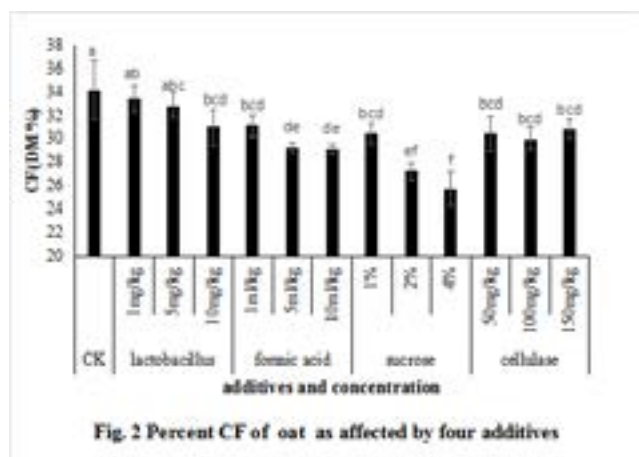


Fig. 2 Percent CF of oat as affected by four additives

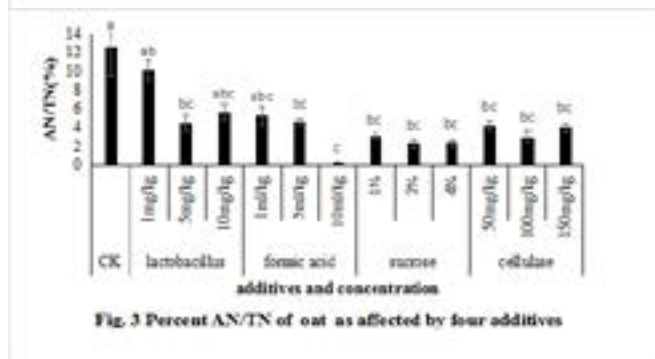


Fig. 3 Percent AN/TN of oat as affected by four additives

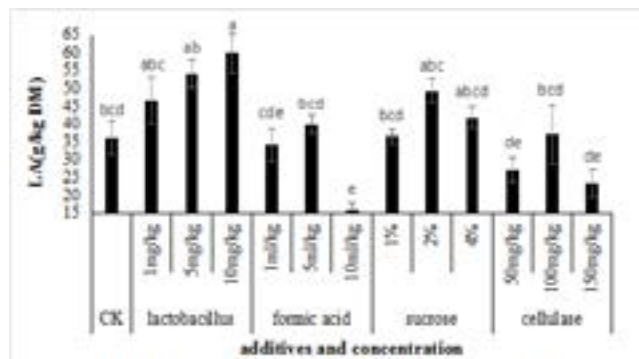


Fig. 4 Percent LA of oat as affected by four additives

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Recent Publications

1. Ni K, Wang F, Zhu B, et al. (2017) Effects of lactic acid bacteria and molasses additives on the microbial community and fermentation quality of soybean silage. *Bioresource Technology*. 238: 706-715.
2. Carvalho V V, Paulino M F, Detmann E, et al. (2017) Effects of supplements containing different additives on nutritional and productive performance of beef cattle grazing tropical grass. *Tropical Animal Health and Production*. 49(5): 983-988.
3. Wang S, Yuan X, Dong Z, et al. (2017) Characteristics of lactic acid bacteria isolated from different sources and their effects on the silage quality of oat (*Avena sativa* L.) straw on the Tibetan Plateau. *Grassland Science*. Vol(Issue): pg nos.
4. Hou M, Gentu G, Liu T, et al. (2017) Silage preparation and fermentation quality of natural grasses treated with lactic acid bacteria and cellulase in meadow steppe and typical steppe. *Asian-Australasian Journal of Animal Sciences*. 30(6): 788.
5. Ning T, Wang H, Zheng M, et al. (2017) Effects of microbial enzymes on starch and hemicellulose degradation in total mixed ration silages. *Asian-Australasian Journal of Animal Sciences*. 30(2): 171.

Biography

Yungui Yang graduated from China Agricultural University in 1987 with a Master's degree in Grassland Science. In August of the same year, he taught at the Northwest A&F University. In 2006, he received a Doctorate in Soil Resources and Information Technology direction. Now he is a member of Lawn Professional Committee of China Grass Society and Director of Grassland Resources and Management Committee. In October 2012, he went to the United States to attend the international annual conference jointly organized by the American Society of Agricultural Sciences, the Crop Science Society and the Soil Science Society. In October 2013, he went to Mongolia to attend the Eurasian Pacific Union Symposium. He is currently a Member of Comprehensive Utilization of Straw Resources of China Agronomy, a review expert of Life Science Division of NSFC, a fellow of American Society of Agricultural Sciences, Soil Society and Crop Society.

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