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Presenter Information

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The studies of grasslands Puna and Sweetheart chicory (*Cichorium intybus* L.) silages

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Key words : chicory , silage , nutritive value , fermentative quality , variety

Introduction As a perennial herb , chicory or endive (*Cichorium intybus* L .) has been used for forage in many parts of the world . Forage chicory produces a large quantity of high quality feed in the warm season under favorable conditions (Li *et al* , 2005) . Chicory has good drought and cold tolerance , and high digestibility and a low fiber concentration (Sanderson *et al* , 2003) , which are favorable for grazing . Intensive harvest was useful for maintaining high quality of chicory (Holden *et al* , 2000) .

Materials and Methods The grassland Puna and Sweetheart chicory were harvested by hand in stage of rosette of foliage leaves , then chopped to approximately 2 cm length . Immediately after chopped , the chicory were bagged and sealed with vacuum . The three silage bags of each variety were opened after storage 3 months and analyzed for pH , buffering capacity and DM , NH₃-N , CP , NDF , ADF , Ash content .

Table 1 The fermentative quality and nutritive value of grasslands Puna and Sweetheart chicory (*Cichorium intybus* L .) silages .

Items	Sweetheart	Puna	SE	P>F
DM , %	9.70	9.45	0.13	0.49
CP , % of DM	13.42	13.56	0.72	0.93
NDF , % of DM	45.83	43.02	0.87	0.06
ADF , % of DM	29.34	30.58	1.06	0.62
Ash , % of MD	15.66	17.29	0.51	0.11
pH	3.87	4.59	0.31	0.29
NH ₃ -N , % of TN	9.30	11.15	0.85	0.33
BC , mE/kg DM	540.71	678.51	53.22	0.23

Results The lower pH of Sweetheart chicory silage than that of Puna meant that the variety affected the fermentative quality of fresh cut chicory silage . The higher pH of Puna chicory silage was according with the higher BC value . Although the low DM content resulted in more effluent , the pH of 4.23 and NH₃-N content of 10.22% indicated chicory silage were better enough for accepted . There were not significantly differences of CP , NDF , ADF , Ash content about two variety chicory silages . The NDF content of Sweetheart chicory silage were higher than that of Puna . The ADF and ash content of Puna chicory silage were higher than that of Sweetheart .

Conclusions The fresh grassland Puna and Sweetheart chicory are favorable for silage , with lower pH and NH₃-N content . There were not significantly difference of fermentative quality and nutritive value between the grassland Puna and Sweetheart chicory silage .

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