Feeding preferences of one-humped camels (*Camelus dromedarius*) on a semi-arid thornbush savannah in East Africa – adaptive advantages in view of increasing aridity of the environment

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Changes of camel populations in the past five decades



Source: http://faostat.fao.org/site/569/ downloaded November 2011

Simultaneously East African rangelands experienced

Increasing frequency of drought Increasing general aridity Wide spread degradation of grass cover Accelerated bush encroachment Spreading of pasture weeds High human population growth Increasing land use pressure

Degradation from perennial into annual grassland

Total destruction of herbaceous ground cover

Bush encroachment and thicket formation

Southward spread of camel herding in East Africa over the last three decades







Feeding Behaviour Studies Forage Quality Measurements Digestibility Measurements

Dietary preference profile by plant growth form

of free ranging dromedaries on a semi-arid thornbush savannah



Dietary preference profile by plant species

of free ranging dromedaries on a semi-arid thornbush savannah



Average chemical composition of the five most preferred forage species [% dry matter]



Digestibility of the five most preferred forage species

(measured in-vivo as dry matter disappearance rate with the nylon-bag technique)



Selectivity index E* by growth form of plants

for cattle and camels measured on a semi-arid thornbush savannah



Conclusions

Adaptive advantage over grazing livestock

Distinct feeding niche

Benign range utilisation

Combined stocking with grazers

Range use and simultaneous range rehabilitation possible



Thank you for your attention