compared to CG milk. This study thus suggests that milk VOCs of metabolic origin could be potential tracers of animal feeding systems.

1.41 Influence of plant competition on biomass production and nutritive quality of three grassland species - results of a pot experiment

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The objective of this study was assessing the influence of grassland species in mixtures on biomass yield and on nutritive quality of selected species in terms of digestibility of organic matter and net energy content. Three grassland forage crop species (perennial ryegrass, chicory and red clover) were grown in binary mixtures with each of nine different companion species in an outdoor pot experiment. All plants were harvested at the same time and the produced biomass was measured for each species separately. Crop biomass was in some cases reduced due to competition with companion species when compared to pure-stand crop yield, disregarding the crop species. Digestibility of organic matter of crop species was not significantly changed. Quality yield was similar to biomass yield and did not show changes due to interspecific competition except for treatments with high-producing companion species where crop biomass was significantly decreased.

1.42 Influence of different cutting dates on regrowth and achene germination capacity of *Senecio jacobaea*

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The ragwort species *Senecio jacobaea* is a poisonous plant currently spreading in Germany. It is found on roadsides, waste land, pastures and occasionally on extensively managed hay meadows. Cutting at the onset of flowering is recommended to control spreading by seeds, but may lead to increased regrowth of the plant. This experiment tests the influence of different cutting dates on *S. jacobaea* to find the cutting date that minimises regrowth, number of newly formed capitula and germination capacity of achenes. *S. jacobaea* plants were observed from June to September 2010 under four treatments: cutting at pre-flowering (I), start of flowering (II) and first withered capitula (III) as well as an uncut control. A number of phenological and morphological traits were assessed at bi-weekly intervals. Samples of capitula from different stages of maturity were collected at cutting dates II and III. A laboratory germination test was carried out for four weeks to identify the germination capacity of achenes. Cutting date III resulted in the slowest regrowth and no newly formed capitula, but germinable achenes were