New Zealand equine pasture

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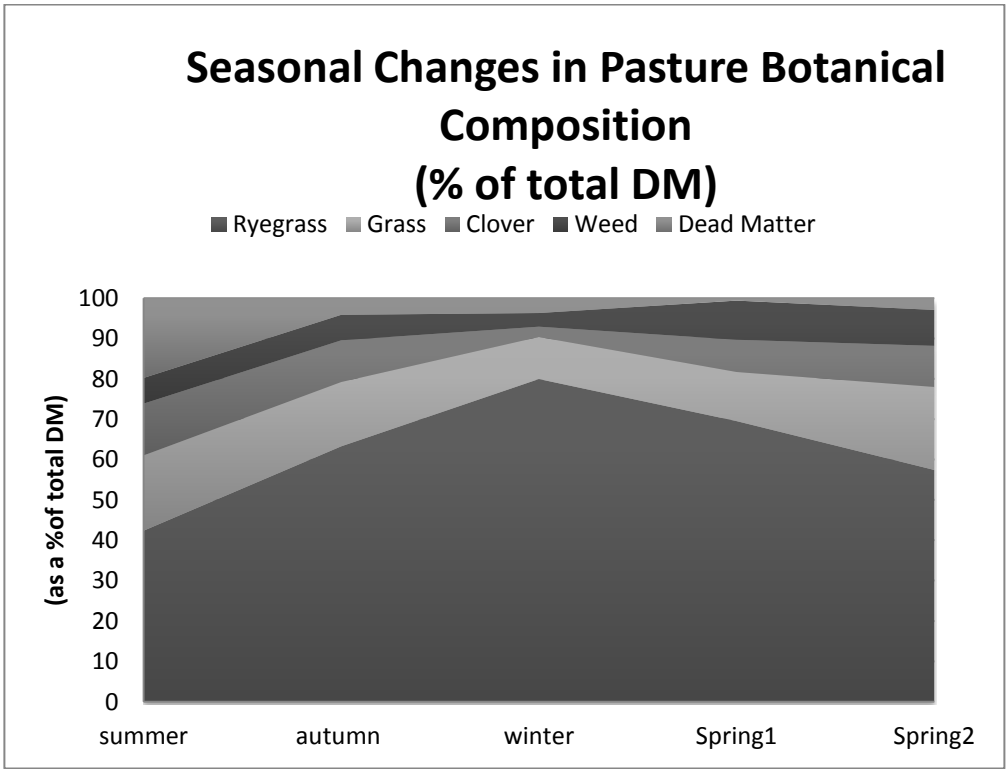
Background: The ability to grow bloodstock at pasture year-round provides New Zealand with distinctive marketing and production advantages over other horse breeding nations. However, even though this is well 1ecognized within the industry, we have limited data on the availability and composition of the pasture our bloodstock are grown on.

Objective: To determine the seasonal quality of pasture, by analysis of the botanical and chemical composition of pasture found on a selection of (n=26) commercial Thoroughbred and Standardbred farms in New Zealand during 2009.

Methods: Pasture samples across five seasonally distinct periods during 2009 were collected from a selection of (n= 26) commercial Thoroughbred and Standardbred studs in New Zealand. The studs were selected on the basis of operating as a commercial breeding operation. At each farm, three paddocks used for broodmares and young stock were randomly selected. The same paddocks were sampled during each seasonal period. Each sample was analysed to determine the chemical composition; metabolisable energy (MJ ME/kg DM), crude protein (CP), acid detergent fibre (ADF), neutral detergent fibre (NDF), soluble starch and sugars (SSS), mineral (ASH), lipid, and organic matter digestibility (OMD) – all expressed as a % of DM. In addition, the botanical composition of each sample was quantified as ryegrass, other grasses, legumes, dead matter and weeds.

Results: The pasture data were obtained from farms that were responsible for the management of approximately 52% and 38% of the national broodmare herd for Thoroughbreds and Standardbreds respectively.



Ryegrass was the predominant grass species, providing 40% of the dry matter in summer and up to 80% of the dry matter available in winter. Other grass species provided approximately 20% of the dry matter, clover provided approximately 10% of dry matter in winter and weeds consisted of 6-9% of the dry matter available across the seasons.

Metabolisable energy was lowest in summer at 9.25 MJ/kg DM and highest in early spring at 12.63 MJ/kg DM. Crude protein also followed this trend, being lowest in summer (18.61%) and highest in early spring (26.57%). Fibre levels were highest in summer and lowest in early spring. Soluble carbohydrate was highest in late spring at 12.32%, and between 10-11% in winter and autumn. Soluble carbohydrate was lowest in summer at 5.09%. Digestibility of the pasture was its highest point in early spring at 86.40% and lowest in summer at 63.46%.

Conclusion: The chemical composition and seasonal values for the pasture are similar to those previously reported for other farming enterprises in New Zealand. The primary differences in both botanical and chemical composition of pasture were due to differences between seasons. There were some subtle differences between regions, driven in part by the use of irrigation. For some parameters examined, there were between farm differences which may reflect differing pasture management practices. The relationship of botanical and chemical composition to pasture management practices is currently being examined.