

Durana and Patriot, New White Clover Cultivars for the Southeastern USA

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Most white clover (*Trifolium repens* L.) cultivars in the southeastern USA are from ladino germplasm (*T. repens* f. *ladino*). Ladino cultivars are high yielding, but not persistent when providing the legume component for perennial grass pastures. Naturalized ecotypes collected in grass pastures in the region were found to be exclusively the stolon dense, intermediate leaf types (*T. repens* f. *hollanicum*) and not ladinos. These collections formed the parent base for development of two commercial white clover cultivars for use in the region, ‘Durana’ (derived solely from ecotype parental germplasm) and ‘Patriot’ (an ecotype x ladino population hybrid). In this paper, we report characteristics and performance of Durana and Patriot, relative to the standard ladino check, ‘Regal’ (standardized against Regal with Regal as 100%; Table 1).

Both Durana and Patriot differed from Regal in having more stolon growing points per unit area, a shorter plant height, greater number of seedheads per plant, and a higher frequency of cyanogenic plants. When inter-planted into either tall fescue (*Festuca arundinacea*) and bermudagrass (*Cynodon dactylon*) and intensively grazed, Durana and Patriot showed much higher stand survival than Regal in sward plots in three separate trials at the two Georgia locations. The yield data, and especially the overall averages across both years and locations, demonstrated that the dry matter yield potential of Durana, Patriot, and Regal are similar in the absence of grazing. In animal performance trials, the addition of white clover increased beef steer gains on both endophyte-infected and endophyte-free ‘Jesup’ tall fescue, but Durana, due to an ability to maintain a higher average clover percentage in the available forage than Regal, was able to provide the highest animal gains on both tall fescue types. Similar results were found for Patriot when inter-planted with ‘Georgia 5’ endophyte-infected tall fescue in another animal performance trial at a different test location.

Durana and Patriot were therefore found to provide better animal gains than current ladino cultivars due to their increased persistence. Their success also demonstrates the value of using ecotype collections for base parental germplasm in white clover improvement programs. These two cultivars are currently being sold commercially and should be valuable additions to livestock production systems in the Southeastern region.

Table 1. Performance of ‘Durana’ and ‘Patriot’ white clover relative to ‘Regal’.

Cultivar	Individual Plants				Sward Plots		Animal Performance	
	Stolon No.	Height	Seedheads	Cyanogenesis	Survival	Yield	Daily Gain	Gain ha ⁻¹
	Relative % [†]							
Durana	194	37	183	987	421	96	117	114
Patriot	177	54	135	550	350	103	119	123
Regal	100	100	100	100	100	100	100	100

[†]Relative % = Durana or Patriot / Regal x 100)