

Release of Kenhy(4F) and Gib(10) Limpograsses

History: Floralta and Bigalta were crossed in the greenhouse, and seed were harvested from both parents. After some difficulty in getting the seed to germinate, 53 progeny plants were obtained (12 with Floralta as mother and 31 with Bigalta as mother). As these plants grew, cuttings were made and the plants were sampled in the greenhouse for digestibility. Field plots were established at Gainesville and Ona (Figure 1) and harvested in 2007 and 2008 (4 to 6 times per growing season). Eight superior hybrids (1, 4F, 9, 10, 4B, 27, 32, and 34) were selected in spring 2009 based on yield, persistence and nutritive value. These were planted for further evaluation under grazing at Gainesville (all 8 hybrids) and Ona (hybrids 1, 4F, 9, 10, and 27).

Initial Grazing Experiments: Initial experiments grazed the selections at two rotation frequencies (2 and 4 wk) and a relatively short stubble height. The lines were grazed for two years (2010 and 2011) at both locations (Figure 2). At Gainesville, hybrids 4F and 10 had similar forage dry matter harvested as Floralta in 2010, but in 2011 they out yielded Floralta by 35 and 31%, respectively (Figure 1). Hybrids 10, 4F, and 1 were the only lines to maintain limpograss cover of 85% or greater at Gainesville (Table 1). At the Ona location, Entry 10 had the greatest total annual herbage accumulation, followed by Floralta and 1.

Advanced Grazing Evaluations: Hybrids 1, 4F, 10, 32, and 34 plus Floralta were planted in 2011 for more detailed evaluation in a larger grazing experiment at Gainesville. The treatments were combinations of two grazing frequencies and two post-grazing stubble heights (8 and 12 inches). Hybrids 4F and 10 had greater herbage accumulation than Hybrids 1, 32, and 34 but were not different than Floralta in the first grazing year of the experiment (2012). In the second year, Hybrids 1, 4F, and 10 had greater herbage accumulation than 32, 34, and Floralta. Hybrids 10 and 4F had 42 and 60% greater forage accumulation than Floralta in Year 2. Limpograss cover after 2 yr of grazing was 49 and 36% greater for 10 and 4F than Floralta. Herbage digestibility was not different among Hybrids 1, 4F, 10, and Floralta.

Stockpiling Experiment: A stockpiling experiment was conducted in Gainesville in 2012 and 2013 to compare Hybrids 1, 4F, 10, and Floralta. Plots were cut to an 8-inch height in early August of each year, fertilized with either 45 or 90 lb N/acre, and stockpiled for 8, 12, or 16 wk. Hybrid 4F outyielded all others in the stockpiling study, while Hybrid 10 also had greater forage harvested than Floralta. Herbage crude protein was less for 4F than the others. Hybrid 4F had superior digestibility to Floralta, and 10 was not different from Floralta.

Preliminary Animal Performance Experiment: An experiment was conducted at Ona in 2013 to compare performance of growing heifers on hybrid 10 and Floralta. DM yields of Floralta and hybrid 10 were not different (6.3 and 6.5 Mg/ha, respectively) and crude protein was not different (10.8%). Neither average daily gain nor gain per ha were different.



Figure 1. Small plot evaluation experiments of 53 limpograss hybrids at Gainesville (L) and Ona (R).



Figure 2. Grazing experiments of selected limpograss hybrids at Gainesville (L) and Ona (R).

Fig. 1. Initial Grazing at Gainesville

Limpograss Hybrid	Year	
	2010	2011
1	3.3 cd [†]	3.0 bc
4B	3.0 d	2.5 bcd
4F	4.4 ab	4.5 a
9	2.7 d	2.1 d
10	4.5 a	4.4 a
27	3.0 d	2.4 cd
32	3.6 bcd	2.8 bcd
34	3.6 bcd	3.0 bc
Floralta	4.1 ab	3.3 b

Fig 2. Advanced Grazing at Gainesville

Limpograss Hybrid	Year	
	2012	2013
1	4.0 b [†]	4.8 a
4F	5.2 a	5.8 a
10	5.7 a	5.1 a
32	4.1 b	3.5 b
34	4.1 b	2.5 b
Floralta	4.8 ab	3.6 b

DM yields are in tons/acre/year. [†]Means followed by the same letter are not different.