



Figure 1. Stretch plastics exposed to the Florida sun.

The first (1990-91) tests showed a great difference in how the exposed plastics held up (Table 1). One sample lasted only about a month, while the most durable plastic never actually failed; that wrap was removed after being exposed for 375 days to make room for the 1991-92 test samples.

The second (1991-92) test samples (including white, black, and clear plastics) were mounted on August 23, 1991. Six months later (March 16, 1992) the white samples of all manufacturers appeared to be more taut and showed the least amount of ill effects from their exposure. Table 2 lists the manufacturers of these samples and the results.

The 1992-93 tests had three replicate samples of 10 plastics. Nine were commercially available; one was a new formulation being tested. There were seven white and three black samples. They were stretched on wooden frames as in previous years and also by wrapping on four bales of forage. All 10 on the wooden frames had good resilience for the first eight months (August 1992 to May 1993) then some started developing pin holes and tears (Table 3). Degradation accelerated during the summer, perhaps because of the greater number of hours of high-intensity sunlight. In June 1993, some of the plastics failed (came loose from one end of the frame). Several had failed by the end of the 369-day test in August. All three black plastic samples showed some degradation at the end of the trial. General observations for plastic wrapped on bales was similar to that mounted on frames;

**Table 1.** "Stretch wrap" plastic evaluated on frames in 1990-91 tests, Gainesville, FL.<sup>a</sup>

Manufacturer	Color	Exposure Days or Days to Failure		
		Low	High	Average
AEP	White	375	375	375
Linear	White	80	131	99
Borden	White	52	187	103
Bonar	White	27	28	27.5

<sup>a</sup> Four samples of 20"-wide plastic (0.001" thick) were stretched 50% and mounted on wooden frames on August 14, 1990. Plastics were exposed to Florida sun for 375 days.

**Table 2.** "Stretch wrap" plastic evaluated in frames in 1991-92 tests, Gainesville, FL.<sup>a</sup>

Manufacturer	Color	Exposure Days or Days to Failure			Comments
		Low	High	Average	
AEP (20" Sunfilm)	White	368	368	368	All samples removed before failing; still taut and bright.
AEP (30" Sunfilm)	White	368	368	368	All samples removed before failing; still taut and bright.
Linear	Black	151	220	201	Three samples developed small holes. One developed a tear at the edge.
Linear	Clear	151	179	170	Failures developed where samples were written on with marking pen.
Linear	White	199	233	221	All four samples failed.
Presto	Black	300	368	342	Black color faded; tension relaxed more than white samples. Three of four failed.
Presto	White	306	368	329	Two of three samples failed.

<sup>a</sup> Four samples of 20"- or 30"-wide plastic (0.001" thick) were stretched 50% and mounted on wooden frames on August 23, 1991. Plastics were exposed to Florida sun for 368 days.