REGISTRATION OF 'CN210' AND 'CN290' SOYBEAN

'CN210' and 'CN290' soybean [Glycine max (L.) Merr.] (Reg. no. 227 and 228, PI 518676 and 518677) were developed by the USDA-ARS and the Illinois and Missouri Agricultural Experiment Stations in a program to provide cultivars adapted to the Midwest that are resistant to soybean cyst nematode (SCN) (Heterodera glycines Ichinohe). The names are derived from the initials of the pathogen and the relative maturity.

The cross of 'Custer' × 'Chippewa 64' (isoline L16) was made in the greenhouse at the University of Illinois, Urbana, in December 1966 (1,2). Plant progeny rows through the F1 were grown in the field at Urbana with visual selection for agronomic type, followed each winter by progeny testing for resistance to race 3 of SCN at the University of Missouri and University of Illinois in 1969 and 1970, respectively. The line L70-2283 was selected from a performance test of SCN resistant F1 lines in 1971 at Urbana. The cross 'Beeson' × L70-2283 was made in the greenhouse in February 1972 (3) and selection was as before with agronomic selection at Urbana and progeny testing for SCN in the winter greenhouse at the Delta Center.

The F1 lines were selected at Urbana in 1976 under experimental strain designations L76-141 and L76-129. They were field tested at SCN infested and noninfested locations in Illinois and adjacent states from 1977 to date including the Regional SCN Test from 1983 to 1987 and other southeastern USA experiment stations from 1984 to 1987. The test weights of Thomas (62.7 kg ha-1) and Morrison (4030 kg ha-1) are significantly different but are higher for Morrison and 3291 kg ha-1 for Council. The seasonal total forage yield (average of 3 clippings) of Thomas was 4030 kg ha-1 as compared to 3390 kg ha-1 for Morrison and 2972 kg ha-1 for Council.

Thomas is a hexaploid triticale (2n = 6x = 42) with winter growth habit and possesses a fair degree of winter hardiness. Thomas is well adapted in northern and central Alabama (34°, 39°N Lat, 86° 46' W Long and 157 m elevation). It flowers (approximately 110 d from 1 January 7 to 10 d earlier than Morrison). It matures 3 to 5 d earlier than Morrison and 'Coushul'. Thomas is 120 cm in height and approximately 10 cm shorter than Morrison. It was tested for grain and forage performance in replicated plot trials in Huntsville, AL from 1984 to 1987 with an average grain yield of 4030 kg ha-1 compared to 3400 kg ha-1 for Morrison and 2800 kg ha-1 for Council. Thomas can be harvested 7 to 10 d earlier than Morrison for silage in the Spring. It has larger leaves (average flag leaf area of 27 cm2) as compared to Coulsul (23 cm2). At boot stage it produced an average dry matter yield of 3440 kg ha-1 compared to 3136 kg ha-1 for Morrison and 3291 kg ha-1 for Council. The seasonal total forage yield (average of 3 clippings) of Thomas was 4030 kg ha-1 as compared to 3390 kg ha-1 for Morrison and 2972 kg ha-1 for Council.

Thomas kernels are semivitreous and weigh 53 mg kernel-1. The test weights of Thomas (62.7 kg ha-1) and Morrison (62.6 kg ha-1) are not significantly different but are higher than Council (52.6 kg ha-1). The spike is lax, mid-fusiform and 13.4 cm long and produces an average of 53 kernels. Grain protein content of Thomas (16.5%) is approximately